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The Massachusetts Medical Society.

MEETING OF THE SECTION OF TUBERCULOSIS, JUNE 18, 1918.

SYMPOSIUM ON THE MASSACHUSETTS PLAN FOR CARING FOR CONSUMPTIVES.

I

THE STATE SANATORIA AND WHAT THEY PLAN TO DO.

BY ARTHUR K. STONE, M.D., FRAMINGHAM CENTER, MASS.

IN the second annual report of the Trustees of the Rutland State Sanatorium the position was taken that it was the purpose of the State to maintain as far as possible an institution which should offer to its citizens an opportunity to recover health and strength and become self-supporting persons once more; and, by demonstrating the curability of tuberculosis in its early stages, to stimulate efforts towards the elimination of this preventable and yet most widespread disease. This recognition that the State Sanatorium should be a place primarily for cure, and to serve as a school where the person infected with tuberculosis should be taught how to live and conduct his life, so as to be returned home in a condition to care for himself and serve as an example to those in his community of what can be done to cure tuberculosis, has been reiterated from time to time both by the trustees and by no less than four commissions which, at the direction of the Legislature, have made special study of Massachusetts' tuberculosis problem. However, in spite of this general working principle, the State Sanatoria have never been able, at any period of their existence, to carry out this plan as a distinct working proposition. When Rutland first opened its doors there was an overwhelming rush of people who wished to enter at once and to be cured, and at no time has there been 50% of the patient population that could be classed as in the favorable stages of the disease. The pressure for more beds for consumptives became so great that in 1907 three other sanatoria were ordered to be built, so that the present Board of Trustees of State Hospitals for Consumptives has under its charge 1065 beds. Nevertheless, this number of beds is not sufficient, even with the existing additional municipal hospital beds, to care for the number of tuberculosis patients applying for admission. And never has there been a longer waiting list than during the past winter.

In spite of all attempts to limit as far as possible the patients admitted to Rutland to those

in the favorable stages of the disease, there has never been at the institution the large group of patients in the early and favorable stages for whom the sanatorium was intended. Indeed, it has seemed during the past two years, since the speeding up of all manner of work throughout the State, that the patients were coming even in a more advanced stage than ever before. Certainly for the past two winters North Reading has had 40-45% or more bed cases, when provision is made for less than 30%, so that at present we are having to refuse admission to patients who should be in a hospital because we feel that we cannot give such cases adequate care and treatment. Thus, in spite of the desire of the trustees, it has never been possible to do the work which it was hoped to do; we have been forced to do work that has amounted practically to segregation of patients, the protection of the public and the care of far advanced cases rather than active sanatorium work.

As all of the institutions are built for sanatorium treatment rather than for hospital treatment, the work in many ways has been very discouraging. In spite of all these handicaps, we have held resolutely to the idea that it was the function of the State to provide a place for cure, and we have endeavored, as far as possible, to maintain, against all discouragements, a sanatorium standard of work.

It was hoped when the program for this meeting was first planned that we should have within a short time nearly 700 new beds with the development of the County hospitals and the building of the so long delayed Lowell and Brockton hospitals. At the present time, it is doubtful exactly when these will be erected. At this meeting it was thought advisable to discuss the relation of the State sanatoria to the Municipal and County hospitals. The four State sanatoria should do distinctly sanatorium work, *i.e.*, they should first of all have a group of patients in the early or favorable stages for recovery, this group to be devoted to the idea that their chief business and aim in life is the recovery of their health. This *esprit de corps* is one of the great fundamental needs for the conduct of a sanatorium. On the part of the institution itself there should be a devoted and intelligent service rendered by the physicians and nurses. This medical and nursing supervision should be further developed by all the necessary adjuncts for good medical work, *i.e.*, a laboratory, with a good technician; x-ray outfit, proper opportunities to do all laryngological and dental work necessary, and further, there should be suitable school and workroom facilities for the sufficiently convalescent patient to avail himself of if he does not wish to return to his former occupation. In addition to this amusements should be furnished so that time will not hang too heavily on his hands.

To accomplish all this will mean a broadening of the present institutions. Such broadening can come only when there is an absolute demand for real sanatorium treatment on the part of the patients, and when such a demand can be shown to exist I am convinced that the Legislature will be ready to meet all the requirements of the case. At present it is realized that segregation is the great work of the institutions and so long as there is simply the demand for this segregation, or a chance to live and a reasonable chance of recovery for those who wish it, nothing more will be done than is being done at the present time. The development of the institutions must come from the general morale and demand of the patients themselves, and must not be foisted upon them by the administration. To accomplish this the county and municipal hospitals, when there are sufficient beds, should relieve the State sanatoria of a certain number of persons who will not fit into this active program of rehabilitation. The sick should be taken care of near their homes and the hospitals should be conducted in such a way that everyone who wishes to enter should have a fair opportunity of getting well, and then when he passes into the distinctly sanatorium class may be transferred, if desired, to one of the State institutions. In addition, when there is a sufficient number of beds to care practically for all the advanced cases seeking hospital treatment, there should be every facility offered, providing there is still a pressure for admittance to the State santoria, for sanatorium work and the care of children to be done at the various hospitals. Patients, on the whole, had best go directly on the discovery of their disease to the municipal or county institution and there be studied by trained superintendents, who, as they show favorable progress, may transfer them to the State sanatoria. Thus there should be no waiting on the part of the patients before they get under

treatment, and the loss of the few weeks, which is so distressing at the present time, will be avoided.

There should be close coöperation between the superintendents of the State sanatoria and the superintendents of the county and municipal hospitals, and conferences should be held from time to time at some of the centrally located institutions in order that the various hospitals and sanatoria may have a close working understanding with each other.

With the extension of the after-care work by the State Department of Health, the bracing up of the dispensary system, and the coöperative development of the county and municipal hospitals with the State sanatoria, it is hoped that there will be a more rapid turnover of patients than is possible at the present time. Patients can be sent home on parole with the definite feeling that they are to be properly supervised and in case of necessity can be readmitted to some institution immediately. At the present time many convalescent cases are held much longer than would be necessary were it assured that the case could immediately be cared for provided things should go unexpectedly wrong.

In certain parts of the State, doubtless, there will be development of children's work or other phases of hospital work, as has been the case in New Bedford, but this can take place only after practically all the advanced cases of tuberculosis are in institutions. This can come about only after thorough, patient, persuasive work on the part of the dispensary nurses or follow-up workers.

Several times this year it has been brought to the notice of the State Board of Trustees of Hospitals for Consumptives that communities felt that they had no tuberculosis problem. Investigation, however, has always shown that it was simply buried and not recognized, and that there is no community that can pride itself that it has no tuberculosis in its midst. On the contrary, every investigation such as the Framingham Community Health Demonstration or the New Bedford Survey and other studies has proved the existence of much unsuspected tuberculosis. It is present if only it can be properly investigated and brought to the light.

It is the desire of those connected with the State sanatoria to conduct institutions for the careful, accurate and scientific treatment of favorable cases and to endeavor in every way possible to return the patients with all speed to the care of their home physicians and their families, relying on the close coöperation of the other agencies of the State for after-care work, and to extend in every way possible by consultation or other help the bringing about of a thorough working coöperative system, which in its turn shall help carry out the ideas of the State Department of Health.

DISCUSSION.

Dr. W. P. Bowers, Clinton: When it was first established that the policy of the State was to develop a series of municipal hospitals, which would be planned in coördination with the State Sanatoria, Clinton, where I live, which has a general hospital, wishing to bring itself into conformity with this scheme, developed a local tuberculosis hospital; and that town being a center for seven other towns, expected coöperation from these other towns, because it placed its hospital at the disposal of all the other towns. But although these towns took advantage of the general hospital, they took no interest in tuberculosis. The result is somewhat disappointing. As you listened to the first paper, I think those who read between the lines could also realize a sense of disappointment, perhaps, on the part of the writer.

With the development of the tuberculosis problem in Massachusetts, it is incumbent upon us to consider what reasons we may have for disappointment. It has occurred to me, as I study the local situation and the situation throughout the State that the disappointment comes very largely from lack of coöperation on the part of the lay and professional public, and also from lack of coördination between the sanatorium and the local hospital.

Now the difficulty with the lay public is that they have begun to lose interest in the tuberculosis problem. It was a very attractive proposition at first when it was shown that there were a great many cases of tuberculosis which could be cured; but when it became demonstrated that there were also a great many cases that could not be cured, there began to develop a certain amount of indifference.

Consumption is as it always has been. The pendulum has seemed to swing back. It is the

function of tuberculosis organizations to educate the lay mind into active understanding of the real view of the tuberculosis problem.

The medical attitude is also disappointing. Like the lay public, the medical men had to be educated. They were educated to a certain extent. They became enthusiastic and then began to lose interest, partly because so many other matters came up which have engaged the attention of the medical men. We find the same conditions now relative to tuberculosis as still persist with many other diseases. It was said at one time, you know, that after a few years there would be no neglected cases of appendicitis, but cases still drift in which have gone beyond the curable stage.

So tuberculosis cases occur in many communities where a diagnosis has not been made promptly. Perhaps one may almost feel that there has been a general negligence.

Now the points we must develop are—first, more active coöperation on the part of the lay public and the physicians. Second, coördination of the State with local sanatoria. It does not seem to me that the officials of the State sanatoria can properly exercise their best functions until they make a definite survey of the work done in the local sanatoria. The local sanatoria should be to a very large extent under the direct supervision of the State sanatoria; and officially the State sanatoria should have power to inspect local sanatoria in order that there may be a certain amount of coördination and coöperation, and especially uniformity in the treatment which may be found to be beneficial.

You know all smaller institutions are following the lead of progressive ones, and progressive ones must be lifting them up all the time.

DR. E. R. KELLEY, Boston: Because I think it must be a matter of very deep interest to all concerned, I should like to confine my remarks to the status of the county tuberculosis hospitals. We have had a great deal of discussion and agitation and difference of opinion relative to tuberculosis hospitals finally formulated into the definite policy of this State which Dr. Stone outlined, and this has been translated by legislative action into law; and the authorities on whom is imposed the duty of carrying out the provisions of this law, proceeded to prepare plans, select sites, and erect institutions with reasonable degree of diligence. I am sorry that they did not use a little more, for about six months' earlier progress would have enabled us to escape from the dilemma in which we now find ourselves.

As we are involved more and more in the war we come across the great question of raising the capital to be invested in the governmental loans for the prosecution of the war. For this reason the Federal Reserve Board has mobilized its control of capital issues by the Capital Issues Committee. Today no bonds can be issued in this country without the approval of the Capital Issues Committee. They have taken the ground that nearly all bond issues, aside from government, must stop. By refusing to approve bonds they have stopped the building of county tuberculosis hospitals in New York, New Jersey and Massachusetts, and many similar projects, such as large municipal institutions, schools, and parks.

These are courteous gentlemen to talk with. They say the plan is very fine; that it is a splendid idea to make tuberculosis hospital provision, and to judge from all reports that it is a very splendid scheme to have a permanent type of construction such as nearly all our counties have adopted. They will say, "We appreciate that the cost is reasonable in view of the general increased cost of construction, but we do not intend that you shall have the money." There is where it stops.

We finally convinced them that the institutions pretty well under way should be finished, so I think Bristol, Plymouth, Norfolk, and Barnstable County, being well advanced, will have an opportunity to finish theirs. The Capital Issues Committee also said that they will be willing to approve a temporary type of construction; but we have never been able to get their opinion as to just what type of construction this means.

As near as can be determined, to construct rough structures, which would be suitable at all when finished, would cost 40 per cent. to 50 per cent. of total cost for a permanent type of construction, and I think the county commissioners are wise not to construct until they can erect a permanent type of construction.

DR. E. B. EMERSON, Rutland: The management of a sanatorium is merely the running of one of the cogs in the machine. At the present

time, as I see the sanatorium side of the question, there are three points that occur to me as to the value of the sanatorium. First, education of the patient; second, a place to care for absolutely helpless dependents; and, third, the least important, is the chance to cure a very small percentage of cases.

It is the general impression throughout the State that Rutland receives only the curable cases,—the absolutely favorable cases,—and that when one has a cough he cannot get into Rutland. The following figures should, I think, in a measure offset this idea.

Of the 431 cases admitted during the year ending November 30, 1917, the application blanks indicated 333 incipient, 93 moderately advanced, 4 far advanced, and one not classified. Of this group the Rutland classification was—176 incipient, 187 moderately advanced, 56 far advanced, 6 non-tuberculous and 6 not classified.

Of the 245 cases admitted from Dec. 1, 1917, to May 30, 1918, the application blanks indicated 171 incipient, 71 moderately advanced, 2 far advanced, and one not classified. Of this group the Rutland classification was—69 incipient, 103 moderately advanced, 69 far advanced, and 4 not classified.

There are several reasons for this variation in classification. First, there is necessarily a lapse of three or four months between the filing of an application and the admission of the patient, and during this time there is opportunity for the disease to progress, but not as a rule from the incipient stage to cavity formation. Second, physicians in their anxiety to have their patients admitted fail to indicate on the chart, which is a part of the application blank, the chest findings, and possibly another group is unable to interpret the physical signs. During the past six months there has been a running average of one hundred and fourteen bed cases, and an average of two or three deaths a month. From the foregoing figures it is readily seen that the majority are not favorable cases for arrest or cure, although many improve sufficiently to return to their homes and former occupations.

One of the speakers referred to occupation, and brought up the matter of nursing. We have been running a training school at Rutland for several years. The school is recruited from among the female patients who have been fortunate enough to obtain an "arrested case." We have at the present time thirty pupils, who, with one or two exceptions, are ex-patients. They receive a two years' training, and we cannot supply the demand of other sanatoria for their services. There is a great demand for nurses for sanatorium work, and the training of ex-patients opens up a grand occupational field, particularly for women. I have been called upon for nurses within the last four months by half a dozen sanatoria.

II.

The Rôle of the County Tuberculosis Hospital.

By Olin S. Pettingill, M.D., Hebron, Me.

In this great field of endeavor to prevent and cure pulmonary tuberculosis, the work of the institutions is two-fold. They should provide beds for restoring cases in the curable stages of the disease to health and to a wage earning capacity, and should care for those in the progressive and permanent invalid class so that they will not infect others. From the standpoint of prevention, all cases may be divided into those with expectoration containing tubercle bacilli and those without tubercle bacilli in the sputum. The majority of patients in the incipient stage have a closed type of lesion, and while in this condition proper treatment offers by far the greatest hope of permanent recovery. The responsibility of the community and the commonwealth is to see that every preventive measure be taken to keep this type of case from becoming an open lesion. The positive case presents the greatest immediate danger to the community especially if there are children at home who come into intimate contact with the sufferer. If a patient with an open lesion and a severe cough lives in the average home, unless the utmost care be taken about coughing and the disposal of the sputum, small children about the house are markedly exposed to infection. There should be a hospital bed available for every case of this kind as soon as it is discovered. Where the beds for these different types are to be provided is now the question.

Limits of State Sanatoria.

State sanatoria should be reserved for the incipient and the moderately advanced cases with a good prognosis. The number of strictly

incipient patients admitted to public institutions of all kinds in the East for treating tuberculosis is small compared with the total. Thirty-eight per cent. admitted to the Rutland State Sanatorium during the year ending November 30, 1916, were classified on admission as incipient. At the Western Maine Sanatorium at Hebron, Me., fifteen per cent. of the cases admitted during the same year were classified as incipient. Most State sanatoria are located in parts of the State best adapted climatically to open air treatment of lung diseases but are often far distant from the homes of some of the patients and hard to reach. It is also difficult for relatives and friends to visit dying patients because of the location. Furthermore, it is not to the advantage of either group to be treated in the same sanatorium. Strictly early cases applying for admission to State institutions being comparatively few, the State sanatoria should reserve their beds for this class and be able to serve all parts of the State alike.

LIMITS OF CITY HOSPITALS.

A few years ago, nearly all cities provided a reasonable number of hospital beds for surgical and medical cases, but made little or no provision for the treatment of pulmonary tuberculosis, the greatest destroyer of life,—a disease which killed more last year among the fighting nations of Europe than were killed in actual combat. The number of beds in the State sanatoria being inadequate, the tuberculosis hospital law of 1910 was passed which states—"That every city shall, and town may, and at the request of the Board of Health, shall establish hospitals for its own tuberculosis sufferers." This left the small towns insufficiently provided for, though, in many instances they contain just as many cases in proportion as the large cities. In some of the cities coming under this law, the hospitals provided are small and, therefore, expensive per capita to maintain. Owing to their size, it is too expensive to provide an elaborate equipment and an expert medical staff in constant attendance. They are often in or near the city limits, but do not have the advantages of the country surroundings and climate.

COUNTY SANATORIUM LAW IN MASSACHUSETTS.

After the failure of some of the cities and towns of Massachusetts to make provision for their tuberculosis cases by erecting their own hospitals, a bill was introduced for the establishment of county hospitals, in place of a town or city unit. The result was that an investigation was ordered by the Legislature to be made by the Department of Health of the Commonwealth of Massachusetts, and particularly to report on the feasibility of a county unit. The outcome of their report was the enactment of Chapter 286 of the General Acts of 1916. Section I of this Act provides,—"That the County Commissioners of each county in the Commonwealth except Suffolk, Nantucket and Dukes County, are hereby authorized and directed to provide adequate hospital care for all those persons residing in cities or towns having less than 50,000 population as determined by the latest U. S. census, within the boundaries of their respective counties, who are suffering from consumption and in need of such hopsital care, and for whom adequate hospital provision does not already exist."

COST OF MAINTENANCE OF COUNTY SANATORIA.

The law provides that the cost of construction, maintenance and repair of the county hospital shall be apportioned to the cities and towns in the county served by the hospital according to the valuation used in assessing the county taxes. In January of each year, the county commissioners will determine the cost during the preceding year and issue their warrant against the cities and towns for the percentage due from each.

PATIENTS: HOW ADMITTED.

Patients shall be admitted to the county hospitals through application by the Boards or Departments of Health of the cities and towns served by the hospitals. The details of this provision for admission will be worked out for each hospital district when once in operation. Patients may be admitted who pay for their care in whole or in part on terms fixed by the Trustees; but all patients shall be admitted in the order of their application and no preference be given to paying patients over others.

COUNTY SANATORIA IN MASSACHUSETTS.

At the present time, as far as I can ascertain, of the ten counties in Massachusetts which come under this law, Norfolk, Plymouth and Bristol counties have their hospitals now under construction. The construction at Middlesex

has been indefinitely postponed. Worcester county has employed an architect to make plans. Hampden, Berkshire and Franklin have made contracts with the county of Hampshire to care for their patients. Hampshire constructed a hospital a few years ago and is now building an addition to make room for its new contracts. Barnstable has a building nearly completed.

The County Commissioners of Essex County have purchased fifty-two acres of land in the town of Middleton on the trolley line between the cities of Lawrence and Salem. The site of the new hospital has an elevation of 200 feet above sea level and is on the southern side of a pine covered hill. The plans call for an administration building, kitchen, dining-room, power house, and two ward buildings, and will be equipped with an x-ray department and laboratory. When finished it will accommodate about 200 patients. At the present time, the foundation and grading are practically completed.

COUNTY SANATORIA IN STATE OF NEW YORK.

It may be of interest to review briefly the county sanatoria movement in New York State. There are sixty two counties in New York State; of these, fifty-seven are termed "up state counties" and the remaining five (Kings, Queens, New York, Bronx and Richmond) make up the greater city. The five counties which make up greater New York, have their own facilities for the care of the tuberculous sick, while the remaining fifty-seven in the State are subject to the New York State County Tuberculosis Hospital Law. Of these fifty-seven counties, nineteen have hospitals for tuberculosis within their borders established under the county hospital law. The first established under this law was the Schenectady County Tuberculosis Hospital, which was opened in December, 1909. The State of New York assumes the care of the incipient cases at the Raybrook State Sanatorium. The county hospitals treat all classes of cases, but are expected primarily to care for moderately advanced and far advanced cases.

WORK OF THE COUNTY SANATORIUM OR HOSPITAL.

In Massachusetts, the county sanatorium or hospital should treat all types of the disease as the occasion demands. There is often valuable time lost while acute early cases and patients with acute exacerbations of their disease are waiting for admission to State sanatoria. These and other emergency cases should receive prompt admission when possible. An arrangement should be made so that patients in the State sanatorium, who have gradually progressed may be transferred to the county sanatorium. On the other hand, patients at the county sanatorium who, on observation, have been found to have a good prognosis, may be transferred to the State sanatorium. Admitting all classes and conditions of patients with possibilities for transferring will help the hospital from acquiring that hopeless atmosphere which is often present in hospitals for advanced consumptives. The number of hospital beds for moderately advanced and far advanced cases is inadequate in nearly all of the counties and cities of the United States. Of course, with this class, the good results which the State sanatoria achieve by returning arrested cases to their homes with a complete or partial earning capacity, cannot be expected, but the usefulness of the sanatorium will be just as real in diminishing infection through isolation of carriers.

This type of institution with its country surroundings and the nearness to the homes of the patients would be an ideal place for locating a unit for tuberculous children. The county sanatorium being thoroughly equipped with means for early detection and for a study of the disease, should be an inspiration to the anti-tuberculosis workers of the county, as well as a source of interest to the general practitioner and all students of the disease. A temporary patient class might be maintained to which physicians could send their doubtful cases for observation to verify their diagnosis. Thorough "team work" among all anti-tuberculosis forces, including the dispensaries, district nurses, the local anti-tuberculosis societies and physicians, is a prime necessity for accomplishing best results; and the county sanatorium with its specially trained staff, should be the centre of the district, each hospital district coördinating with the others and with the general plan of the State.

DISCUSSION.

Dr. B. H. Peirce, Cambridge: I think the question of the county tuberculosis hospital is largely in connection with the local problem. As I listened to Dr. Pettingill and Dr. Locke,* it struck me very forcibly that what Dr. Locke

* See Journal, page 263.

said might well apply almost entirely to the county tuberculosis hospital. The province of the county hospital is with the advanced class, without doubt.

The county hospital is simply the getting together of several communities or several towns to do what the large city is able to do for itself. I think that one of the important things, one of the ways in which the county hospital can be of advantage is in getting education into the country towns. Let the people know something about the movement, of the State plan to provide for help in these communities.

One thing that ought to be emphasized which Dr. Pettingill brought out is that patients should not be too far from home. This is one of the great difficulties which I have seen. The patient is quite willing to go where a relative can come to see him, or where he may possibly get home once in a while, which would be the case with the county hospital. He will not go a long way from home, where he cannot see his friends. I feel it is important to make him happy, to make him contented and have him go back into his home town feeling so, and spread the good news so that others, who should go, may be willing to undertake it.

Coöperation between the county hospital and the local practitioner I think can be used to great advantage, and I believe that it is possible by earnest endeavor largely to obviate the point that Dr. Emerson has just spoken of, making application without giving complete information. The temporary class that Dr. Pettingill mentioned would be a great means of helping along to the end.

DR. A. J. ROACH, Tewksbury: Dr. Pettingill has covered so thoroughly the scope of the county tuberculosis hospital that it seems almost impossible to find anything which has not been touched upon.

I agree with Dr. Pettingill that the county sanatorium or hospital should treat all stages of the disease as the occasion demands, and that the State sanatoria should be primarily reserved for the early and favorable cases.

Dr. Pettingill's suggestion that an arrangement should be made so that patients in the State sanatoria who have gradually progressed may be transferred to county sanatoria is a good one, especially so if the patient returns nearer to his home and relatives. On the other hand, patients at county hospitals who, after observation, have been found to have apparently a good prognosis, I think should remain in the county institution unless there is some good reason for transferring them.

I assume that Dr. Pettingill feels by this arrangement that there would always be a number of favorable cases in the county hospital as it would be some time perhaps before there would be beds available in the State sanatoria. However, I feel that it is always well to have some favorable cases in hospitals which primarily are intended for far advanced cases, indefinitely, to act as a stimulus, especially to those who are pessimistic and indifferent. If it became generally known that the county institutions were intended for far advanced and hopeless cases only, and the reports showed very little improvement and perhaps no cases of arrest or discharge, it seems to me that the public would soon become reluctant about sending their relatives and friends there.

I have always found it very difficult to transfer patients showing signs of progressive failure to the terminal wards. Very frequently they become indifferent and pessimistic and lose whatever determination they may have had. There are times when they will refuse to go, and send for their relatives to take them home.

While we have only a very small percentage of favorable cases at the State Infirmary, about 5 per cent. incipient and 15 per cent. moderately advanced, they relieve that hopeless atmosphere which would exist if they were all far advanced cases. And during the present crisis we have had to depend upon them more than ever to help out on the wards on account of the lack of nurses and attendants.

In regard to admitting patients to the county hospitals, it seems to me that a method similar to that employed by the trustees for the State sanatoria should be adopted, the details of which can be worked out when the hospitals are in operation. The patient should have a recent physical examination and a blank similar to the one now in use should accompany the application from the Boards of Departments of Health. This will greatly facilitate in classifying patients on admission.

The thing that impressed me most in Dr. Pettingill's paper was his proposed unit for the observation of tuberculous children. While

the number of such places is gradually increasing throughout the State, they are still, however, inadequate and we cannot have too many of them. I feel that all the county hospitals should be equipped for doing this work.

Dr. A. S. MacKnight, Fall River: When the Resolve requested by the Legislature of 1915 was acted upon by the State Department of Health, and the Report forwarded to the Legislature, it stated that County Hospitals should serve the people within their respective county jurisdictions,—in other words, that they should "*fit in*" the zone of towns and cities, of less than 50,000 population, to furnish adequate hospital care for cases of consumption. Unfortunately, but three counties have taken up and acted upon the legislation passed at that time. There is another feature that occurred to me, and that is, that the Hampshire County Hospital Act and the Barnstable County Hospital and Infirmary Act, are special enactments, and do not apply to counties as a whole.

I think it would be a good thing if we had uniform legislation, that is, if we could have all hospitals under Chapter 286. If we are going to get the best results, we ought to work within a very definite piece of legislation. I would suggest, therefore, that the proper thing is to have that brought about.

Another thing is, that the county hospitals should serve as one link in a three-link chain, *e. g.* the State, the county, and the municipality. It is very evident, from the progress made, that the county hospital is not going to be the last link in that chain.

Municipalities usually come in at the end of the line. Why are municipalities permitted to lag in the construction of their local tuberculosis hospitals? It seems to be a piece of negligence not to provide city hospitals wholly for tuberculosis, as we find the greatest number of cases in municipalities where there are congested sections.

It is a noteworthy fact that, when municipalities become somewhat stringent with their tuberculosis cases, the latter pass over the city line, on the suggestion of the physician, and get out into the open country, eventually dependents of the local towns. In support of this, I might cite that, in one county within the district, a comparatively small town called up the other day, reporting ten cases of tuberculosis, for which they had no way of providing hospital care. Another very small town, where we thought there were no cases of tuberculosis at all, showed three. One man, who escaped from Peabody, was living in a family, with six or seven small children, happy in the thought that he had not been discovered, until the local board found him. He then refused to sign an application for Lakeville, or to return to his own town. That is the situation in most of the small towns which county hospitals are supposed to serve.

Dr. Kelley touched upon the Federal Reserve Board, and the Capital Issues Committee. I think it would be a good piece of patriotic work (and we are just as patriotic as other people, even though interested in tuberculosis work), if all tuberculosis workers could be gotten together in an effort to persuade and to work with this Capital Issues Committee.

We are certainly pushing the tuberculosis problem backward when we fail to provide hospitalization for cases of tuberculosis. It seems to me (although it might have no weight with that committee) that we ought not to be obliged to take a backward step in this matter of "Capital" versus "Tuberculosis."

III.

Local Municipal Tuberculosis Hospitals.

By Edwin A. Locke, M.D., Boston.

Scarcely a generation has passed since the beginning of the present anti-tuberculosis movement, and yet the scope has become not only national but world-wide. The control of the efforts against the disease in consequence of its broad expansion has almost entirely passed from private to public agencies. Accumulated experience has served in part to determine finally the main principles of general policy, but unanimous opinion on all points is not yet possible.

There is ample proof of the paramount importance of tuberculosis as a public health problem in the overwhelming evidence that nearly all individuals acquire some degree of infection with tuberculosis and that this is usually a consequence of direct contagion in early life.

By reason of the widespread nature of the disease, as well as its dependence on numerous

general factors influencing its spread, the problem of the control of tuberculosis is the most complex and difficult of all those concerning public health. In the main these factors are such as to be most effectively met by local effort, and we have come to regard the matter more and more as a community affair. While the state or federal government may well assume a directing or supervising function, the real activities against the disease should be organized and controlled by the communities themselves.

No specific treatment or method of inducing immunity has been discovered, and, in fact, the results of much careful research leave us with the impression that any adequate means of producing either of these results is more than ever improbable. Now, as formerly, therefore, the keynote of all anti-tuberculosis organization should be prophylaxis. If any proof of the soundness of the preventive measures previously adopted is needed it is furnished by the study of the work in many fields during recent years. Results generally point to the individual with active tuberculosis, whatever the stage of his disease may be, as the essential focus or cause of its spread.

Since it is now generally admitted that in the great majority of cases of infection with tuberculosis the implantation takes place in infancy or early childhood and that infection in adult life is relatively rare, the preventive measures should clearly be directed to the protection of the child in early years. So important are these considerations, to my mind, that they almost overshadow all others and indicate a very radical revision of our established program of anti-tuberculosis work. Two methods of affording protection in the early years are possible. First we may attempt by various means to increase the general resistance of the child and, second, to protect the young from contagion by segregating the consumptives. Of the two the former seems to me to be of far greater importance than the latter. It is largely out of consideration for the child that the provision for isolation of the open cases of tuberculosis should be provided and find a place of prominence in every local program. The best opinions appear unanimous on this point.

"It is felt everywhere in this country that the institutional care of the advanced case is perhaps the most fundamentally important phase of the whole problem." (Biggs.)

"Out of the many conflicting opinions and theories as to the best means of combating the disease, one distinct method has come to be universally recognized as essential to ultimate success—segregation—and as a logical result of this, its concrete expression in the means for segregation—the hospital and the sanatorium." (Williams.)

With these statements I am heartily in accord. It is obvious, however, that it is unnecessary to segregate all persons with active tuberculosis. A large percentage can, under favorable conditions, be treated safely in their homes. The early case should be sent to the sanatorium. Many can be supervised effectively by the tuberculosis dispensary. The special local hospital should be provided particularly to furnish care for those who cannot be treated safely by the above means, in other words, for those who are a menace as possible foci of infection. A considerable experience with the so-called "incorrigible consumptive" has convinced me of the wisdom of compulsory segregation. A further and important function of the local hospital is to afford institutional care for the destitute consumptive who, in many instances, is dangerous to others only in consequence of poverty.

I have spoken of these as local hospitals. There is a wide difference of opinion as to whether these institutions should be maintained by and under the supervision of the state or local authorities. My views may be challenged by some, but I venture the statement that large State hospitals for the advanced cases have yet to demonstrate results which are wholly satisfactory. There seems to be strong evidence, on the other hand, that much more effective work can be done by the municipal and county hospitals, and this is our present state policy.

Assuming that local hospital accommodations should be made available for all consumptives whom it is deemed necessary by the health authorities to segregate, how shall the financial burden be distributed and how shall the hospitals be placed with regard to the centers of population? But few states have adopted any definite policy. Clearly, the rural communities cannot be expected to maintain individually a special hospital with but a few beds, as the relative cost would be excessive. Our Massa-

chusetts laws wisely provide for the combination of small towns by counties for this purpose. The law of 1911, as amended in 1912, says, "Each city shall, and each town may, and upon the request of the State Board of Health, shall, establish and maintain constantly within its limits one or more hospitals for the reception of persons having smallpox, diphtheria, scarlet fever, tuberculosis or other diseases dangerous to the public health as defined by the State Board of Health, etc." A law enacted in 1916 permits the cities of under 50,000 population which were not already maintaining a tuberculosis hospital, to come under the county plan.

The advantages and functions of local tuberculosis hospitals for advanced cases may be summarized as follows:

1. By providing for the isolation of the consumptives dangerous to others, they make it possible to clean up their homes and thus to eradicate the centers of infection.

2. They offer an asylum for the helpless, where they can be given the best of hospital treatment.

3. The expert medical care, constant supervision, moral control and provisions for appropriate diet and open-air treatment offer the best possible hope of cure.

4. They possess a very important educational value to the local physicians.

5. As in the case of the sanatoria, they have an important educational function also as regards the patient and the community generally.

Whether or not these institutions should form a unit of a general or contagious hospital is not so much a matter of choice as of circumstances.

It cannot be too often reiterated that, as important as they are in themselves, these chronic hospitals must not be planned except as a part of a general program, one of many closely coördinated agencies. They are an essential gear, but not the whole machine. Never should the hospital be established except in the closest possible connection with a tuberculosis dispensary, for their functions are inseparable.

I have been asked to discuss the strictly local or municipal hospital, but in the limited time assigned me it will be possible to consider only the most essential features.

A. *Name.* A seemingly insignificant matter, the question of a name for the institution, has become in actual practice one of considerable importance. It is surprising how generally the public is prejudiced against the hospital known by the title of "consumptives' hospital." The exact name is of little or no moment so long as the word "consumptives" is avoided. The choice of the term "sanatorium," even though a misnomer, has much to recommend it, inasmuch as it suggests the hope of cure, an ideal which should always be kept in the forefront, even in the hospital for the advanced.

Likewise, it is very desirable that the hospital be as accessible as possible with respect to transportation, preferably within city limits and attractively placed. All these considerations contribute greatly to the readiness with which patients can be persuaded to enter the instituton.

B. *Size of Hospital.* The proper ratio of the number of beds to the population of the city is variously estimated. On the whole, the most reasonable basis is one founded on the number of yearly deaths from the disease. In the early years of the municipal hospital it was stated as a reasonable rule that the number of beds should equal from one-fourth to one-third of the mortality figures. Recently several authorities have put the ratio as high as one to one, that is, the bed capacity should equal the number of yearly deaths from tuberculosis.

From our experience of a decade in Boston, it is my conviction that the capacity will be found reasonably adequate if the number of beds provided be one-half the number of deaths for a given year. If the hospital is built on the pavilion plan, the bed capacity can be readily increased as the pressure for beds indicates. The number of beds in the Boston Consumptives' Hospital is about 40% of the deaths from pulmonary tuberculosis for the year 1917, and needs for increasing the size of the institution are not urgent.

C. *Cost.* It is utterly impossible to formulate any accurate basis of cost, since any such figures must vary greatly from year to year and in different parts of the country. The actual cost of many such hospital plants has varied from a few hundred to several thousand dollars per bed. Furthermore, since there is no common basis of estimating the cost, figures for different hospitals cannot be fairly compared. At best, the necessary expenses are

considerable. The economic losses from tuberculosis are fairly staggering, and we must face the inevitable fact that the cost of combating it is great, but in the long run a reasonable investment for the municipality.

On general principles, a hospital plant for the treatment of tuberculosis should be built for permanency, as the most sanguine view of the results of efforts to combat tuberculosis must admit that for many decades the reduction in the death rate, even if the present rate of decline continues, cannot very materially lessen the needs for beds. The best in the long run is the cheapest. The institution should be planned with particular consideration as to durability, efficiency in administration, and to permit of future expansion.

D. *Types of Buildings.* So far as I am aware, the best authorities favor the pavilion type of ward building and of essentially fireproof construction. Cleanliness and disinfection are vital considerations. The patients are to be largely of the advanced stages, who will need hospital care in the strictest sense, and the facilities for such treatment are quite as necessary as in a general hospital. If the hospital is to consist of several pavilions a few may wisely be arranged with large open wards, but for the most part, a far more satisfactory scheme is the division of the otherwise single ward into small rooms to accommodate from one to six patients. By this latter method the total number of beds can be as great as with the open wards arrangement.

Every provision for open-air treatment is as vital as in the sanatorium. The rooms can easily be arranged to permit of every bed being wheeled out to an open veranda, as is done at the Boston Consumptives' Hospital. Naturally, a certain number of the actually dying cases can best be left in their rooms, but generally speaking, the advanced case should be kept in the open air.

For a considerable percentage of the cases to be treated in the local hospital, the expensive pavilion type of wards is not only entirely unnecessary, but less well adapted than the so-called "cottage ward" (modified "lean-to"). This can be constructed for but a small fraction of the cost of the pavilion. Naturally, the type best adapted to treatment in these cottages is the ambulatory, and, as a rule, afebrile patient. At some municipal hospitals bed cases are also treated in such wards, and the results are reported as satisfactory. At our own municipal hospital these cottage wards have been in use for nearly ten years and have proved so satisfactory that we have gradually increased the proportion of them until at the present time they comprise approximately 45% of the total bed capacity. Not only are they much cheaper to construct and maintain, but are vastly more popular with the patients. The sanatorium ideal is more easily carried out here than in the pavilion wards.

Every municipal hospital should include a special ward and preferably an entire ward building, for infants and children. The needs for treatment at this age are so different in some respects from those of adults that a distinct unit is desirable. The plan of treatment, in order to be satisfactory, must include regular school work in an open-air schoolroom and supervision of recreation, supplemented by such activities as nature classes and manual work.

E. *The general equipment* should be no less complete than that of the most up-to-date general hospital for acute diseases, *i.e.*, a modern hospital in every sense. Not only should this equipment include a full outfit for clinical laboratory examinations but for research as well. No hospital, whatever its type, fulfills its proper function which does not make some contribution to medical knowledge. I believe that the municipality may just as reasonably provide funds for research as for the care of patients.

An efficient x-ray department is also a prime essential. Surgical emergencies occasionally arise, and these, together with a regular amount of elective surgery, make it desirable that every tuberculosis hospital should be provided with surgical equipment. Chronic cases of bone and glandular tuberculosis receive but scant attention in the general hospitals, and it would seem advisable to have beds definitely set aside for such cases. Not only should they have the advantage of modern surgery, but in some instances at least, the same reasons for isolation exist as in the case of the pulmonary type of the disease. Certain of the surgical problems are more or less orthopedic, and in the larger hospitals an orthopedic department may be desirable. If the number of post-mortem examinations is considerable, a resident pathologist should be included in the medical personnel.

The medical administration, because of its narrow and special nature, will not attract the best clinicians of the city, as do the acute general hospitals. The tuberculosis hospital is, therefore, forced in self defense to adopt the system of a paid resident staff. An arrangement most generally in vogue is to place the medical work in the hands of a resident physician and as many assistant resident physicians as are needed to supervise properly the treatment of the patients. The ratio of medical residents to patients should be at least one to one hundred, and preferably one to fifty. In large centers, where there is a medical school, a close affiliation between the school and hospital is always of mutual advantage. At the Boston Consumptives' Hospital, for example, where a working agreement between the hospital on the one hand and the Harvard and Tufts Medical Schools on the other, exists, the terms for the assistant residents have been made only six months, in the hope of attracting the best young graduates in medicine who will be willing to devote this time for special training along these narrow lines after completing a service as interne at one of the general hospitals. Each assistant resident is given living and a salary at the rate of one thousand dollars per year.

The usual visiting staff under such an arrangement is superfluous except as some one is needed to have the general oversight of the work of the residents and to control the general medical policy of the hospital. Where there is a considerable hospital organization, as in the large cities, a chief of staff may be in charge of both the hospital and dispensary, at the same time having control of the teaching, if any is done.

A laryngologist is essential to the visiting staff. Consulting specialists may be added as necessity requires.

All advanced consumptives require constant attention, and the most helpless bed cases a great amount of personal care. This means a relatively large force of nurses, and since the narrowness of the work precludes a general training school for nurses they must be largely selected from among the graduates in nursing. In a few of the larger cities it would seem desirable to try the experiment of establishing a training school for special instruction in tuberculosis, with a short course of not more than six months. Under average conditions, there should be at least one nurse for every ten patients.

F. *Work for Patients.* This very vital subject has received much attention during the last ten years, and some plan of manual training is followed in many hospitals. As to its value, there can be no question, but its particular form is frequently a matter of no little difficulty and difference of opinion. General graded out-of-door work about the grounds, carpentering, painting, farming, light ward work, as well as knitting, sewing, book-binding, rug-making, basketry, etc., are among the more common of the forms employed. Although in some instances the work done may be made to yield some financial return to the patient, its chief value is in keeping him occupied and interested and his mind from centering on his misfortune. A somewhat promising field is with the convalescent individuals, who may be taught some healthful form of occupation which they can take up after discharge.

G. *Social Service.* To argue for the importance of social service work in a modern hospital is entirely needless. It is as much a necessary part of the hospital function as the medical work itself. The interdependence of medical and social effort is more real in a tuberculosis hospital than in a general hospital. Much of the social service function can be taken over by that department in the tuberculosis dispensary with which the hospital is associated, but unless under the same roof it seems better that the hospital should have its own organization as a genuine and distinct department of the hospital. Funds for this work should not come from private charity but from a part of the regular financial budget, to be appropriated by the city. Two main lines of work are open, namely, the supervision and care of the family while the patient is in the hospital, and the after-care subsequent to discharge. What is accomplished in these two fields determines more than all other factors combined the degree of success or failure attained in the hospital undertaking.

H. *Social and Religious Life.* Means to furnish recreation and amusements for patients are also vital to success. Residence in the hospital must in a majority of cases be voluntary, and in order to attract and hold the patients, the life there should include ample

provision for entertainment. A recreation center in the administration building is necessary where moving pictures, plays, lectures, music, etc., can be furnished. Such facilities may be combined with those for religious services, either as a separate building or rooms in the administration center. Unless religious services are held in the institution a relatively large number of permissions to leave the hospital to attend church must be granted each week, and such absence is very frequently attended by unfortunate results to the patient. It is by no means exceptional to have the patient who has left the hospital to attend church return intoxicated, and in a greater number other excesses induce equally unfavorable results. The most important consideration in the treatment of the tuberculous individual is that he should be under constant supervision in the hospital.

DISCUSSION.

DR. P. C. DEVLIN, Lynn: I believe that these problems which confront our local hospitals are going to loom larger and larger as time goes on. During our present economic straits, it seems to me that our hospitals are certain to be neglected. There are some of them with walls and ceilings cracked and chipped, and sadly in need of a refreshing coat of paint. I believe at this time, if we are to do our full duty by these institutions, we should make some more united efforts to see that these are kept attractive, because they serve in a large measure just the immediate public that is easily in reach of them.

The relatives and friends of the patients come to visit often and in large numbers, and the reputation which the hospital maintains in the community, I have always felt, depended upon the impression it made upon those people. Just as they expected it to be located on some elevation of ground, they also expected it to be light and cheerful and sanitary, as well as that the patients should be well cared for and treated.

Since most of the patients are of the advanced type, I feel when they get the individual care, such as they can easily secure in small institutions, they are getting the best possible treatment.

The day is not far distant when we are going to have some assistance in State inspection, which will not only materially aid in the management of our institutions, but will have a great moral effect upon our local governments.

DR. R. W. HASTINGS, Brookline: The Brookline tuberculosis ward of fourteen beds is part of the contagious hospital which comes under my supervision. It is not many years ago since our tubercular patients in Brookline were cared for in little old cottages which the community had an idea had been used for smallpox.

It was pretty hard to get patients to go. It is very much easier now that we have a small ward with two separate rooms on each side, the most attractive hospital anywhere. We must have something that is attractive to the people in the community, for that I believe is an important feature of a local tuberculosis hospital.

We have had no difficulty, rather to my surprise, because of the idea of being associated with scarlet fever, diphtheria, or other contagious cases, perhaps because we have had no unfortunate cross infection. Sometime we shall have, I suppose, but we try to avoid all such possibility.

One thing our Board of Health has done recently in relation to tuberculosis work, spurred on by our health officer, Dr. Denny, who has been most active and efficient in board of health work, was to pass a regulation, which I think is a pretty rare one. This says that no person having tuberculosis in a communicable form shall live in a household with a child under sixteen years of age, unless the Board of Health says it is safe for them so to do.

That is going to get the incorrigible, which legislation will not allow us to touch, and it will help in various ways. Whether the Supreme Court will allow it to stand, I do not know, but it is a big step in an effort to segregate patients that ought to be separated from their own families.

Tubercular social service is carried on with us through our dispensary, and has antedated a good deal of our hospital work. The relationship of our hospital with the dispensary we try to keep as close as possible. Patients who go out from us are carefully followed up by the dispensary nurse.

Dr. Hitchcock has pointed out* that the school physicians and the tuberculosis officials are not closely enough allied. The attempt has been made in Brookline to cause to be reported by me as Chief Medical Inspector, and by me to

* See JOURNAL, page 269.

the school physicians of Brookline, every case of tuberculosis which occurs in families with children in the schools. All these children are checked up individually, and the school physician is notified that so-and-so in a tubercular family goes to school. This fact is entered on the health card, and frequently the child is looked over by the doctor to see if there is any suspicion of tuberculosis about him.

IV.

The Massachusetts Tuberculosis Dispensaries.

By John S. Hitchcock, M.D., Northampton, Mass.

In 1916 I had the honor to publish an article on the then newly established Massachusetts Tuberculosis Dispensaries, in which I tried to outline the general plans for defense against tuberculosis, and the part which the dispensary was expected to assume. Today I am able to present the concrete facts concerning the work of these dispensaries during the year 1917.

First, let me again briefly outline the whole plan and the part of the dispensary in it.

In considering the promising points of attack, the disease was divided into three groups: first, the *open* case—a definite danger to the public; second, the *incipient* case—a potential, but not in its present state, a definite danger to the public; and third, the *exposed and probably infected but not yet diseased* person—again not an immediate danger to the public. It was stated that a sharp division could not be made between these groups. One ran into another in such an insidious and complicated manner that general dividing lines had to be arbitrarily drawn and, in individual instances, the line was badly blurred.

As institutional weapons against these groups (again speaking of the majority rather than of the individual case), for the open case, the active menace to the community, we had the hospital; for the incipient case, the cases requiring careful education in the ordering of their daily lives, we had the sanatorium. For the third group, the exposed but not yet demonstrably diseased case, we planned the dispensary as our prophylactic.

All this sounded very attractive and clear-cut and complete as propaganda. We of course, knew that accurate segregation of a whole group into its particular type of institution was physically impossible, and we knew from actual experience that it might be not only impracticable but unwise in individual cases. In hospitals many an incipient case, and in sanatoria many an open case, has gone on to speedy arrest and presumptive cure. The clinician has developed good judgment along the line of selecting the proper institution for the individual case. In the dispensary problem it was recognized that many individual cases of both of the diseased groups have been successfully treated at home under clinic or dispensary supervision, and that dispensary activities could not be confined to those well persons, chiefly children, whose exposure to disease and consequent need of supervision was the real moving impulse that resulted in establishing the dispensaries. Consequently we laid great stress on the importance of the nurse. We felt that she would be eighty per cent. of the dispensary; that its success or failure would depend very largely upon her character, ability and personality. We loaded her with wide reaching responsibilities, demanded that she be almost superhuman in her knowledge of local conditions and individuals, and in her wisdom and tact in reaching and guiding sensitive, sick persons and sensitive, sick families.

The dispensaries were established and put in operation in 1915. Statistics for 1917 should show reasonably accurately what the result has been.

For 1917.

Dispensaries	53	
Physicians	102	
Nurses, full time	64	
Nurses, part time	20	
Social workers	6	
		192
Under supervision	21,689	(409 each)
Examinations	8,803	(166 each)
Found tuberculous, and suspicious	4,830	(55%)
Found not tuberculous	3,973	(45%)

The chief functions of the dispensary as planned were: (1) to supervise the third class of patients, the exposed but not yet diseased, and (2) to be a central clearing house for information as to the existence and condition of diseased persons and as to the wisest measures to apply to each case for its isolation, relief or cure.

As to supervision—21,689 persons under supervision means an average of 409 to each dispensary—it means that an average of over 200 persons are under the supervision of each one of the nurses. This is far too many. Those of

you who are familiar with tuberculosis work will realize that these nurses and workers are not spending much daytime at the movies. We delegated 80% of the value of the dispensary to the nurse; in view of that estimate it seems rather curious that only 44% of the personnel of the dispensary workers is made up of nurses. And as a matter of fact we feel that we need that other 36%, and need it badly.

As to information on file—during 1917 there were 8365 new cases of pulmonary tuberculosis reported from the State. We have histories of approximately 50% of these new cases. We hope that our added nursing staff will secure 100% of these histories from now on. During this same year, 1917, we had 8803 persons examined in the dispensaries. We have there the exact records of physical and family histories of these, the 4830 tuberculous or suspicious patients, and of the 3973 who proved to be non-tubercular. Add to this the less complete but still valuable data recorded concerning the 21,689 persons under supervision, and you will agree that we have a large volume of most valuable information at our command. This information was not available before the dispensaries were established, and could be secured only by this or some similar concerted and centralized plan.

In trying to control a disease as prolonged and insidious as tuberculosis, histories of illnesses and contacts that would seem ancient history if applied to most of our other contact diseases, are of prime value. We are getting them in our dispensaries, and they are in immediately available form.

An interesting feature of the data concerning dispensary work is the fact that while in 1916 there were 2590 private cases supervised by dispensary nurses, in 1917 there were 2439, a decrease of 151. The number of cases thus visited is large and indicates a good degree of cooperation and confidence on the part of the practising physician, but the decrease at a period when our tuberculosis rate is not declining needs an explanation. It makes one look for a reason. Are physicians referring their cases to the dispensary rather than keep them as private cases, or are they overlooking an aid in their work, or have they tried it and found it unsatisfactory? If the first is the case, the dispensary is doing exactly what we hoped it would do; if the second, the dispensary forces should remind physicians of the facilities for help at their command; if the third, we should question the methods and personnnel of the dispensaries.

We have learned that a very early diagnosis —practically a pre-pulmonary one—can be established in children, and that proper institutional or home treatment is exceedingly promising with them.

The school physicians and nurses do not seem to be giving, as yet, full coöperation. How much jealousy there may be on both sides, or how much indifference is not clear. At any rate, more combined effort certainly could be made in this part of the field, which seems of such tremendous importance.

Real coöperation between the dispensary and the school should show brilliant results.

These dispensaries were established in 1915. If two years of existence can show so large a volume of work, we are interested in what five will show. We will assuredly need a larger force effectively to take care of the large number of cases that are coming under dispensary supervision. We have made an excellent start—it remains to keep in the running. The demonstrations of the usefulness of carefully supervised home treatment are too definite to be overlooked, and extensions in this line will call for more workers. Can anyone doubt their value or that we can and shall have them?

DISCUSSION.

Dr. E. O. Otis, Boston: The main objects of the tuberculosis dispensary are: first, to make a diagnosis at the first visit if it can be made, or if not to keep the patient under observation until a definite diagnosis can be made; second, to dispose properly of the positive active cases, so that they may come under treatment and to keep them under control until they are thus placed; and third, to examine all contacts.

The method of accomplishing these essential things may differ somewhat in different localities and under different conditions, but the instrumentalities employed must be practically the same. In the first place, there must be a competent physician or staff, who ought to receive some compensation; better and more attentive work is rendered, as a rule, where there is some remuneration involved.

In the second place, there should be a visiting nurse or nurses, who also possess some

knowledge of medical social service, or else a social worker who has some knowledge of tuberculosis. In my opinion the experienced social worker, with a knowledge of the economic and social conditions met with in dispensary patients, does quite as good, if not better, work than the purely visiting nurse, but much depends upon the personality of one or the other.

I do not believe that it is the province of the tuberculosis dispensary to treat patients, save in exceptional cases, but rather to make the diagnosis and arrange for the treatment elsewhere.

As I have said, the methods of obtaining the same results in a tuberculosis dispensary will necessarily differ in different localities and under different conditions. A dispensary which confines its work to its own town or city has, perhaps, a simpler problem than one which serves a larger community, as in the tuberculosis clinics, for example, of the Massachusetts General Hospital, or the Boston Dispensary, where patients come from almost anywhere.

In every tuberculosis dispensary, however, there must be follow-up work if the best results are to be obtained, and this fact is now recognized in all medical out-patient work.

The follow-up method in vogue at the Boston Dispensary, with which I am the most familiar, is a part of the general social service system, and it is no different in the case of the tuberculosis department from that in other clinics, except as the disease requires a different application of the same principle.

Follow-up work is self-explanatory,—it is to get the patient to come back to the dispensary as long and until his case has been definitely diagnosed and he has been placed under proper treatment and until he passes out of the hands of the dispensary into other competent ones.

BOSTON DISPENSARY.

Medical Follow-up ..... Date .....
Name ..... Age ..... S.M.W.D. ... B.D. No. .....
Address ..... Worker .....
Employment .....
Make up of household .....
.....
.....
Date of last visit ..... Case now active in S.S.D. { No .... Yes ...
Diagnosis .....
.....
.....
Reasons why call necessary (symptoms, tests advised, unsuccessful letters, etc.)
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

(Back of Card.)

Report made by ..... Date of visit .....
Patient not located ..... Why? .....
Relation of person interviewed to patient .....
.....
Date patient will return .....
Reason patient has not returned .....
.....
.....
Present physical condition (source of information) .....
.....
.....
Description of home conditions .....
.....
.....
Action taken by follow-up worker .....
.....
.....
Suggestions as to further action needed .....
.....
.....
.....
.....

Often this follow-up work involves also care and provision for his family while he is away regaining his health.

When the patient first presents himself to the clinic, besides the usual history, we have what is called the "visible file," which is a small card marked off in squares for each month and each day of the month. Upon this card the date is indicated, when he is to return, if his return is desired. On the day indicated this "visible file," together with the history and previous examination of the patient, is sent to the clinic, and if he does not return, the follow-up work automatically begins first by a letter. The following are samples of letters used:

"The doctor wants you to return to the clinic on ——. If you are well or for any other reason you do not plan to return, please send us a letter. We wish to know how you are. This is sent to you for the sake of your own health."

shows you have trouble that needs to be treated, and at the last visit the doctor found that you needed treatment at another hospital."

If there is no response to the letter a home visit is made by the social worker, who is given various data regarding the patient with the reason why the call is necessary, and on the reverse side of the card she writes her report, what action she has taken, and whatever suggestions she has to make.

The value of this follow-up work is illustrated by the case of a patient under observation for tuberculosis, upon whom the Wassermann test was positive. He did not return to learn this, but the "follow-up" brought him back for proper treatment.

Positive cases of tuberculosis, if from out of town, are referred to the board of health of that town and they are kept under observation until we know that the responsibility for them is assumed by that town. If it is desired that

..... Ad..... No.....

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Mar.																Mar.
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	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Jan.																	Jan.
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May																	May
June																	June

Or—

"The doctor wants you to return to the clinic on ———. At the time of your last visit the doctor felt your trouble was not cured. For your own health you ought to have more treatment. Kindly answer by coming. If not, write why you are not coming back. The doctor would like to have you keep up your treatment. The doctor is really accomplishing something for you."

Or if we find suspected lesions, or if it is necessary to have a Wassermann test made, a sputum examination, an x-ray or a tuberculin test, we send him a letter like this:

"The last time you were here the doctor wished you to have a certain test made. This is to find out whether you had trouble which needed to be treated. The doctor wants you to return so the test can be made."

Or if the test was made:

"The doctor wants you to return to the clinic next week. The test made last time

the dispensary see that provision is made for the patient, application is made for entrance into the State sanatorium, if the case is a suitable one. In Boston all cases are referred to the Out-Patient Department of the Consumptives' Hospital, where the follow-up work is assumed by the nurses of that institution.

In brief, the object of the follow-up work in tuberculosis is to keep the tuberculous patient under observation until he is properly provided for in a hospital or sanatorium, and again to follow him up when he returns as an arrested case to see that he comes to the dispensary from time to time for an examination, in order that he may keep well. And further to hold all "suspects" until a definite diagnosis is made one way or the other.

DR. S. HOBERMAN, Malden: It seems to me that Dr. Hitchcock has set forth the

dispensary problem correctly, particularly as to the necessity for coöperation between the school physicians and the dispensary. I had in mind that it would be of assistance if the teachers could help in taking afternoon temperatures. I think it would help the physicians in the dispensary. Of course, I appreciate the delicate situation where a family physician is involved, but uppermost in our mind must be the benefit of the community.

Dr. Locke's suggestion relative to prophylaxis I think is a good one, and I would add to this the importance of the solution of the incorrigible cases. In Malden the incorrigibles command our utmost attention.

I think Dr. Hitchcock stated that there is a notable decrease in attendance of patients at dispensaries. I am one of the physicians at the Malden Dispensary, and I do not find that to be so, but I think this is perhaps due to our splendid nurse. We want a nurse to have three qualities,—character, ability and personality,—and not to overtax her with an excessive number of cases to follow up at a time.

Another item relative to the Malden Dispensary is that we have adopted the name of "Public Health Dispensary." I think that means a good deal. The fact that there is no decrease in the number of cases who have attended during the past year would substantiate this fact. In our name we eliminate the stigma attached to the word "tuberculosis" in the mind of the public.

Original Articles.

WOUND SHOCK AND THE VASOMOTOR CENTER.

By W. T. Porter, M.D., Boston,
AND
E. Emerson, Providence.

[From the Laboratory of Comparative Physiology in the Harvard Medical School.]

Former communications[1] from this Laboratory established the fact that fat embolism is a frequent cause of wound shock. They made no effort to explain the mechanism by which fat embolism produces wound shock. The present communication offers proof that shock results when the capillaries in the bulbar vasomotor region are plugged by fat globules.

Following is a typical experiment upon a rabbit; similar observations have been made on cats and dogs.

July 29, 1918, a rabbit weighing 2 kilos was lightly curarized and artificial respiration was begun. The carotid diastolic blood pressure was 160 mm. Hg. The subclavian artery was ligated at its origin from the aorta and also at a point beyond the origin of the vertebral artery. The internal mammary branch was ligated, but two muscle branches were left open. By means of a cannula in the subclavian, one-fifth cubic centimeter of neutral olive oil was injected. Part entered the muscle branches and part the vertebral. In a few moments, the blood pressure began to fall. In fifteen minutes, the diastolic pressure had fallen to 40 mm.

The outstanding fact discovered in this and many similar experiments is that a minute quantity of fat will produce the characteristic fall in blood pressure, and the concomitant symptoms of wound shock, whenever the blood supply to the vasomotor region is interrupted by the plugging of its capillaries. In the experiment cited, the quantity of oil injected was one-tenth cubic centimeter per kilo. There is every reason to believe that less than this small quantity can be used with success. Moreover, a part of this 0.1 cc. per kilo was lost in the unligated branches of the subclavian artery; another part was lost in filling the subclavian and vertebral arteries between the point of injection and the bulbar cells; finally, some oil necessarily found its way into the capillaries supplying portions of the bulb other than the vasomotor region, for the vasomotor cells occupy but a very small fraction of the bulb. It follows that the amount of oil actually used to produce shock in this experiment was exceedingly small.

It must at once be recognized that the quantity of oil with which we have produced experimental shock by embolism of the vasomotor center is far less than the amount which has repeatedly been found in the blood vessels of human beings after fracture of the femur.

A microscopic examination of sections through the vasomotor region, stained with Sharlach R, abundantly supports the conclu-

[1] Boston Medical and Surgical Journal, 1916, Vol. clxxv, pp. 854-858; 1917, Vol. clxxvi, p. 248; *Ibid.*, p. 699; 1917, Vol. clxxvii, pp. 226-228; 1918, Vol. clxxviii, pp. 657-660. Comptes rendus de l'Académie des Sciences, Paris, Oct. 30, 1916, t. 163, p. 492; *Ibid.*, July 23, 1917, t. 165, p. 164. Proceedings of The Institute of Medicine of Chicago, 1918, Vol. ii, pp. 24-29.

sion that minute quantities of fat may produce shock. When the amount of oil injected is relatively large (for example, in the cat, 0.4 cc. per kilo) fat is readily found in many sections. When the fat injected is as little as 0.1 cc. per kilo of body weight, the stopped capillaries are hard to find. Yet the physiological evidence is beyond question. The injected fat has gone only to the brain; all parts of the brain can be cut away without lowering the blood pressure, if only the vasomotor center be respected; hence, the vasomotor region in our present experiments must have been injured.

The demonstration of fat embolism of the vasomotor center as a cause of wound shock is as follows: (1) Excluding abdominal wounds, in which a hydrostatic fall in blood pressure may follow an invariable local injury to the largest vascular area in the body, the most frequent causes of shock in wounded soldiers are shell fracture of the femur and multiple wounds of the subcutaneous fat. (2). In fracture of the femur and in multiple wounds of the subcutaneous fat, considerable numbers of fat globules are found in the blood. (3) A quantity of fat much smaller than that known to circulate in the blood in the injuries most often followed by shock will produce shock when the nutrient vessels of the vasomotor region are stopped.

CONCLUSION.

Fat embolism of the vasomotor center is a frequent cause of wound shock.

Book Reviews.

The Technique of Psychoanalysis. By Smith Ely Jelliffe, M.D. New York and Washington: Nervous and Mental Disease Publishing Co. (Monograph Series No. 26). 1918.

Of all the recent fundamental advances in neurology and psychiatry there is probably no subject which has been so completely misunderstood, antagonized, and even purposely distorted as that of psychoanalysis. This applies not only to its theoretical, but likewise to its practical and technical aspects. Psychoanalysis is an art as well as a science and it is peculiarly fitting that this work by Jelliffe on the technic of psychoanalysis should appear at a time when so much can be hoped from psychoanalytic conceptions applied to the treatment of the war neuroses. For it is in the war neuroses, which are grouped under the generic name of shell shock, that we find such perfect and complete examples of psychoanalytic mechanisms in the various psychogenetic factors which precipitate these conditions. So clearly is this seen that the clinical symptoms of shell shock, both from their conscious and unconscious aspects, might have been described by Freud himself.

As in all highly specialized branches of medicine, the practice of psychoanalysis presupposes a minute acquaintance with its underlying theories. No one is qualified to practise it without a fundamental training in psychopathology any more than one is qualified to perform a surgical operation without a knowledge of anatomy. The technic of psychoanalysis is not cut and dried, it is becoming more and more perfected with the advancement of the science, while a recent statistical study, giving the results of psychoanalytic treatment in a large series of cases has shown that it is by far the best psychotherapeutic method known to the medical profession.

Jelliffe's book is an admirable one for the beginner in psychoanalysis, and it can be supplemented by the descriptive bibliography given in the course of one of the chapters. It is noted with interest that he devotes a large space to an aspect of psychoanalysis in which there are so many pitfalls, namely, a description of what patients and what clinical conditions *not* to analyze rather than what patients to analyze. While the field of clinical psychoanalysis of the neuroses is wide, yet there are certain conditions in which psychoanalysis is ineffective either from the nature of the neurosis or from the resistance which may be set up. For instance, while early or mild cases of dementia precox are distinctly amenable to psychoanalytic therapy, the severe types do not yield to psychoanalysis because of the inaccessibility of the mind of the patient.

The Oedipus hypothesis is very well described, likewise the most important of all psychoanalytic therapy, namely, the handling of the transferences and the resistances, to which two chapters are devoted. Recent psychoanalytic investigation has shown that the analytic treatment of the neuroses consists less in unearthing repressed material than in the handling of the patient's emotional likes and dislikes known technically as transference and resistance. Certainly psychoanalysis does *not* consist, as most of its critics would make us believe, in the discussion of sexually pornographic material, for in a well-conducted psychoanalysis there is far less reference to the sexual than in the usual medical history. It is clearly and pertinently pointed out also, that there are numerous nervously sick individuals who do not need a complex analysis because they have not developed a complex neurosis. It is in these individuals that the neuro-

sis can be adjusted by a few talks along psychoanalytic lines.

It is to be hoped that this book with its well-balanced attitude and its insistence on the clinical applications of psychoanalysis for the nervously ill rather than on the so-called inadequate rest cure and the administration of sedatives, will do much toward placing psychoanalysis in the right light before the medical profession.

Publications of the Red Cross Institute for Crippled and Disabled Men. Edited by DOUGLAS C. MCMURTRIE.

The Red Cross Institute for Crippled and Disabled Men has issued Numbers 12, 13, and 14 of Series 1, dealing with war cripples in Italy, Germany, and France.

"Provision for War Cripples in Italy" describes the organization, legal measures, medical treatment and artificial limbs, and methods of reëducation adopted in Italy. This work was started by private individuals, but efforts were soon coördinated and brought under governmental control. The Milan school, the largest and most scientific, became the model for succeeding institutions. A National Federation and a National Board supervised the work of local committees and offered assistance in medical treatment, material relief, reëducation, placement, and the claiming of pensions. Legal measures provide that crippled soldiers are to be sent, after their first surgical treatment, to military centers for physical and orthopedic treatment. Here the cripple must remain for fifteen days. He is furnished with temporary artificial limbs at the expense of the government and given an opportunity for reëducational training. If he accepts, he remains under military discipline and stays at school for a maximum period of six months, when he is reinstated in some form of work.

The problem of artificial limbs and functional reëducation is only beginning to be dealt with in Italy. No standard type of limb has as yet been decided upon. Little has been done to help the work of cripples, but a commission has been appointed and is studying the matter. In the case of reëducation, Italy faces a problem greater than that of other countries, for a large proportion of her men are peasants, with no background of experience in trade and very little education. The character of the Italian school is formal and institutional. Each school is under the direction of a voluntary local committee, of which there are about twenty-six. There is an elementary course, and a business course, including Italian, arithmetic, writing, geography, French, bookkeeping and stenography. There is also a course for postal and telegraph employees. The importance of the study of agriculture is beginning to be considered. Pensions have not been reduced with increased earning capacity, and every effort is made to place cripples in permanent and congenial positions.

"Provision for War Cripples in Germany," Series 1, Number 13, shows that there are two outstanding features about the German system of care for war cripples. In the first place, there is no real central authority; the schools are of varying types and unevenly distributed. The second feature is the volunteer character of the work; reëducation is in private hands, and is not even supervised by the Imperial Government. When the war broke out, Germany had all the elements with which to begin immediate work, for she already had many cripple homes, workshops and hospitals, many of them under private auspices. Medical treatment and provision of artificial limbs and functional reëducation are under the control of the Imperial Government, while vocational reëducation and vocational advice and placement are cared for by private and state agencies. Orthopedic treatment proceeds upon the principle that practically every cripple can be made fit to work again. The time of treatment is from two to six months. More and more emphasis is being placed on physical exercise as a means of strengthening the stump and the remaining limbs. All artificial limbs are furnished and kept in repair by the government. The principle has been accepted that the prosthesis should reproduce, not the limb, but the lost function.

Reëducation in Germany is carried on at the same time as medical treatment. Some of the hospitals are equipped with shops, and training is given under the hospital roof by civilian instructors. This indoor plan is followed less than the outdoor plan, where the instruction takes place in the local trade schools. Every town has at least one trade school, so that there are excellent facilities for this work. Here instruction is not given under military discipline. There are special schools for one-armed men. Every effort is being made through the agricultural schools to return as many as possible to agricultural occupations. The teaching in all schools is very largely voluntary. The response of the men to the appeal to overcome their handicaps for the sake of the Fatherland is a willing one. Employers coöperate by manifesting a benevolent policy.

Vocational advice is a civilian function. A man is generally urged to go back to his old trade if possible; if not, to an allied one. Cripples are visited in the hospitals by members of local committees who encourage the men and find suitable employment. There are five agencies to which a cripple may turn: the care committee, the public employment bureau, government service, employers' and workmen's associations, and miscellaneous charitable and private agencies. There are also special employments due to the war and under the war department.

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PREPAREDNESS IN TUBERCULOSIS.

FROM certain statements that have been published in the papers, the public in this State might easily be led to believe that Massachusetts as a State is not prepared to do two important things. These are: first, to take care of any possible increase in tuberculosis in its civilian population, which will undoubtedly occur; and, second, to take care of tuberculous soldiers should the army authorities change their present plan of caring for these soldiers in the army sanatoria.

There is very little doubt, in the minds of those best qualified to judge, that there will be a slight increase in the incidence of tuberculosis in the civilian population for causes so evident as to need no comment.

As far as tuberculosis in the Army is concerned, however, Massachusetts as a State is in no way concerned. The Army at present has taken the very definite stand that tuberculosis among its soldiers is its own problem, and that it intends to care for such tuberculous soldiers in its own institutions. The army sanatorium at Fort Bayard, New Mexico, has been in existence for a long time. Newer army sanatoria have been established or are now in the process of construction at Otisville, New York, Asheville, North Carolina, Connecticut, and elsewhere. Should, however, the army plan be changed, and should Massachusetts be asked to care for tuberculous soldiers, and should there be a marked increase of tuberculosis in the civilian population, the following facts will show how well prepared is this State to cope with this new problem.

The Board of Trustees of Hospitals for Consumptives, which Board has control of the four State sanatoria, at Rutland, North Reading, Lakeville, and Westfield, comprising at present about one thousand beds, has given this matter careful consideration. At the Westfield Sanatorium, there is a large open-air school building which could easily and quickly be turned over into a dormitory to house at least one hundred extra patients,—soldiers or civilians. In addition to this, there is a large building now not in use at this institution which could be, in a comparatively short while, made over to accommodate one or two hundred more. At the Rutland and at the Lakeville State Sanatoria, through a wise provision of the present Legislature, a new and enlarged kitchen building was made possible at Rutland and a new power plant at Lakeville. The construction of these is now under way. With this additional help of the kitchen and power plant, by means of simple shacks, tents, etc., each of these institutions could quickly and easily be prepared to accommodate one hundred or more patients each, in addition to its present population.

The Barnstable County Sanatorium, appropriation for which was made in 1915, is now in operation. Although at the present time there are only twenty-six beds, the administration, power, and kitchen facilities are such as to make it possible for this institution to accommodate one hundred or more patients if necessary. In addition to the Barnstable County Sanatorium, the Legislature of 1917 passed what is known as the County Tuberculosis Hospital Act, authorizing the construction of certain other county tuberculosis hospitals. Up to the present time, the Capital Issues Committee of Washington has held up the construction of these institutions. Recently, however, the

Norfolk, Plymouth, and Bristol Counties have been permitted to go ahead with the construction of their institutions, and the building of these hospitals is now under way. They will provide for three or four hundred beds. Should the Capital Issues Committee permit of it, the construction of the Middlesex and Essex County Hospitals will be rushed, providing three hundred and fifty beds. The Lowell Tuberculosis Hospital is about to be opened.

In addition to this, the Trustees of Hospitals for Consumptives, foreseeing a possible need, obtained plans from practically every municipal tuberculosis hospital in this State whereby the number of beds of such local institutions could quickly and easily be increased. Data in regard to this are on file at the office of the Board.

Thus it is evident that the State of Massachusetts is well prepared to handle any increase in tuberculosis in its population, civil or military, which may arise. It is right and proper that both the lay and medical public should be acquainted with these facts, and should know that Massachusetts, which has long been a leader in its anti-tuberculosis campaign, is still maintaining its high standard.

VITAMINE AND NUTRITION.

In the August issue of *The Scientific Monthly*, there is an interesting article describing some research work with vitamines, by Dr. H. Steenbock. Vitamines may be characterized as water-soluble or fat-soluble. Chemically, both vitamines are entirely unknown; yet, without either kind in the diet, animal life, at least that high in the genetic scale, is impossible.

Observations of symptoms indicative of the lack of the water-soluble vitamine in the dietary were made on man himself. In the Far East, there has been prevalent a disease known as beriberi, characterized by a loss in weight, with muscular atrophy, contracture or paralysis, which may either run a rapid course or take on a chronic form. Experiments were made by a Dutch investigator, Eykman, who observed that birds fed exclusively on white rice developed symptoms resembling those of human beriberi. Experiments have shown, also, that a nutritional polyneuritis can be induced in the rat by a lack of the water-soluble vitamine in the ration.

Efficiency of a ration in the fat-soluble vitamine is not manifested so specifically. A young rat will fail to grow and a mature rat will fail to maintain itself; in addition, these rats are predisposed to a purulent conjunctivitis which usually leads to permanent blindness. Often rations deficient in the fat-soluble vitamine have induced the formation and disposition of calculi along the urinary tract. It is possible that these two conditions are related.

Man cannot restrict himself to grains as his source of supply of this dietary essential. Leafy materials and some roots contain this vitamine in large amounts. In the present emergency in the economic food situation, all students of nutrition should seek to point the way for rational modifications in the selection of nutriments. When the food consumption is large there is little cause for concern, but when it is limited in quantity and variety it is well to realize that any one of the factors,—vitamines, protein, salts, or energy,—may limit a man's capacity for work. Vitamines are indispensable in the diet. There is cause to look forward with considerable anticipation to the economic results which are bound to come with a fuller knowledge of what constitutes the valuable dietetic properties of many food materials individually and in various combinations.

THE NATURE AND CAUSES OF SHOCK.

Readers of the Journal have followed with interested attention the evolution of Dr. Porter's classic studies in shock. In successive brief papers, models of scientific accuracy and literary style, he has reported in its columns his researches, on European battlegrounds and in the physiological laboratory, into this important clinical problem. The sixth of this series appears in the present issue. It demonstrates that fat embolism of the vasomotor centre is a frequent cause of wound shock. Only those acquainted with Dr. Porter's personality can fully appreciate its inspiration; but all can realize the value of his work to experimental science and to practical medicine.

NEED FOR PHYSICIANS IN THE ARMY.

The determination of the War Department to raise an Army of at least five million men is now publicly announced from Washington. This means that approximately 50,000 doctors

are imperatively needed. At present about 25,000 have been recommended for commissions. Massachusetts must do still more than she has done in the past.

MASS. STATE COM. NAT. DEFENSE, MED. SECT.

MEDICAL NOTES.

CHOLERA GERMS IN DRINKING WATER.—The *Social Democraten* has a dispatch describing the cholera epidemic in Petrograd. It says that though the water of the Neva is filled with bacilli it is used for drinking. On July 5, there were five cases and 44 on July 8. The daily death rate is now said to be 25.

Men and animals fall every day in the streets, weakened by lack of food. There is no organization, no means of transportation, and patients often must wait 12 hours for hospital carriages. Most of the patients are women, and many from the upper classes are suffering most from hunger.

PUBLIC HEALTH REPORT.—The United States Public Health Report for July 26, 1918, contains an article by T. H. D. Griffiths, describing a portable privy for use in field service. It can be erected and taken down easily and quickly; it can be rolled into a compact bundle, and the cost is moderate. The materials necessary for constructing these privies and directions for erecting them and taking them down are given. The report contains, also, statistics concerning conditions among troops in the United States, and summaries of diseases prevalent in the different States and foreign countries.

CHOLERA UNCHECKED IN PETROGRAD.—There are more than 20,000 cases of cholera in Petrograd, according to the *Fremdenblatt* of Hamburg, which reports that up to August 3, 1100 deaths had occurred. The authorities are helpless and the disease is spreading uncheckd.

HEALTH DEPARTMENT OF NEW JERSEY.—The report for 1917 of the Department of Health of New Jersey contains detailed information regarding the health conditions of that State. There have been 44,186 deaths and 70,211 births registered. Special surveys have been made of the county hospitals for the care of the tuberculous; nine counties in the State have already erected hospitals. A tuberculosis exhibit was conducted by the Bureau of Education and Publicity. The Bureau of Local Health Administration has been engaged in new forms of work; the handling of morbidity records, and the enforcement of sanitary regulations in the special sanitary district created in the territory surrounding Camp Dix. In regard to communicable diseases, epidemiological investigations have been made in forty-two outbreaks of communicable diseases, twenty-six of which were typhoid fever. The report contains, also, the records of the Bureau of Food and Drugs, the Division of Milk Control, the Bureau of Engineering, and the State Laboratory of Hygiene.

THE RELATION OF RAILROADS IN THE SOUTH TO MALARIA.—In the United States Public Health Report for August 2, 1918, there is an interesting article concerning the relation of the railroads in the South to the problem of malaria and its control. One of the most significant features of this relation is the heavy economic burden resulting from diminished earnings, impaired efficiency, loss of time, and consequent handicaps upon industries and communities. Railroad constructions are frequently responsible for favoring the development of Anopheles mosquitoes, and often labor gangs, badly infected, are moved from place to place and housed in unscreened cars, permitting the unrestricted access of mosquitoes.

There are several steps which railorads can take in dealing with the malarial problem. The engineering department should consult with the sanitary or medical department before construction is begun. The medical and sanitary departments, on their parts, should encourage intensive mosquito-control compaigns conducted in communities through which railroads pass. They should give thorough treatment to actual cases of malaria among employees. Systematic educational activities should be engaged in by means of literature, lectures, and, if possible, by actual demonstrations. Once the elemental facts of the nature, cause, and transmission of malaria are understood by a sufficiently large proportion of the working force, an immediate return in diminished sickness, increased efficiency, and greater satisfaction among the workers may be confidentially expected.

WAR NOTES.

COMMISSIONS IN THE MEDICAL RESERVE CORPS.—The following appointments in the Medical Reserve Corps have been announced:

Captain. G. A. Peirce, Tewksbury.

First Lieutenants. H. L. Quimby, Gloucester; A. E. Mills, Somerville; E. R. Leib, Worcester.

LEXINGTON DOCTOR COMMISSIONED.—Dr. Winsor M. Tyler of Lexington, who was recently commissioned a captain in the Medical Reserve Corps, has been stationed at Fort Adams, Newport, R. I. He is the second Lexington physician to enter this branch of service. The other is Dr. James J. Walsh, who is now in France.

DORCHESTER DOCTOR IN NAVAL SERVICE.—Dr. Frederick M. Sears of Dorchester has been commissioned second lieutenant in the Navy and assigned to the naval hospital at Newport, R. I., as assistant surgeon. He has served as chairman of the health board of the United Improvement Society.

239 WOUNDED ARE BROUGHT TO THE UNITED STATES.—Two hundred and thirty-nine sick and wounded soldiers from the American Expeditionary forces were brought to the United States during the week ended July 26 and sent to army hospitals for physical rehabilitation.

FRANCE GIVEN $100,000 FOR FOUR HOSPITALS.—Half a million francs have been appropriated by the American Red Cross to complete the installation of four tuberculosis hospitals. One of these is for use by the National Railway Union, comprising 400,000 members, and another is for Serbian tubercular cases.

BOSTON DOCTORS PROMOTED.—Several Boston doctors have been promoted recently. Among those advanced to the rank of Colonel are: Lieutenant Robert Patterson, Dr. John Miller Finney, and William Sidney Thayer.

Lieutenant Patterson went broad as executive head of the Harvard Unit, Base Hospital 15. He has been detached from this hospital and sent to Italy.

Dr. Finney, who was head of the clinical surgery department of Johns Hopkins Medical School, is a graduate of Princeton College and Harvard Medical School. He served as a surgical house officer at the Massachusetts General Hospital in 1890.

Dr. Thayer, who was professor of clinical medicine at Johns Hopkins Medical School, was born in Milton, Massachusetts, and received his degree from the Harvard Medical School in 1889. He served as a medical house officer at the Massachusetts General Hospital in his senior year at the Medical School. He then went to Johns Hopkins, where he was rapidly advanced.

The following are promoted to the rank of lieutenant-colonel: Frederic A. Washburn, Harvey Cushing, Roger I. Lee, Joel E. Goldthwait, Fred Towsley Murphy, Joseph A. Blake and Howard Lilienthal.

Dr. Washburn, promoted from major, is one of the best known hospital authorities in the United States. Previous to going abroad he was administrator of the Massachusetts General Hospital. He went overseas as executive head of Base Hospital 6, which was assembled at that hospital.

He was born in New Bedford and was graduated from Amherst College in 1892 and the Harvard Medical School in 1896. He served as surgical house officer at the Massachusetts General Hospital and Children's Hospital. He served as surgeon of the 6th Massachusetts Regiment in the Spanish War, and was in Cuban, Porto Rican, and Philippine campaigns. On his return he was appointed assistant resident physician at the Massachusetts General Hospital, and later he was chosen administrator. He has served as president of the American Hospital Association. Lieutenant-Colonel Washburn is at present detached as head of the unit and is in charge of the supervision of all base hospitals for the Government.

Dr. Fred Towsley Murphy, who has been promoted to the rank of lieutenant-colonel, is surgeon-in-chief of the St. Louis Hospital Unit. He was born in Kansas and was graduated from Yale in 1897. He attended the Harvard Medical School and on graduating in 1901 was appointed a surgical house officer at the Massachusetts General Hospital. On completing his service he was appointed an assistant visiting surgeon to out-patients at that hospital, and later visiting surgeon. In 1911 Dr. Murphy was chosen professor of surgery at Washington University, St. Louis.

FITCHBURG DOCTOR IS APPOINTED CAPTAIN.—Dr. George A. Griennard of Fitchburg has been appointed captain in the Medical Reserve

Corps and has been ordered into active service at Camp Greenleaf, Fort Oglethorpe, Ga.

Worcester Doctor is Given Rank of Major.—Dr. Frank W. George of Worcester has been advanced to the rank of major. When he enlisted in the Medical Corps last April, he was commissioned a captain, and has since been on duty at an American base hospital in France.

Chicopee Physician Wins War Cross.—First Lieutenant Max P. Cowett of Chicopee Falls, Massachusetts, formerly an interne and house physician at Bellevue Hospital, New York, has received the *croix de guerre* from the French government in recognition of heroic work in the trenches. He was graduated from Bellevue Medical College in 1915 and entered the national service in May, 1917.

BOSTON AND MASSACHUSETTS.

Week's Death Rate in Massachusetts.—During the week ending August 10, the number of deaths reported was 201, against 205 last year, with a rate of 13.36, against 13.86 last year. There were 44 deaths under one year of age, against 42 last year.

The number of cases of principal reportable diseases were: diphtheria, 29; scarlet fever, 4; measles, 23; whooping cough, 39; tuberculosis, 56.

Included in the above were the following cases of non-residents: diphtheria, 9; scarlet fever, 1; whooping cough, 2; tuberculosis, 8.

Total deaths from these diseases were: diphtheria, 1; scarlet fever, 1; whooping cough, 5; typhoid fever, 1; tuberculosis, 19.

Included in the above were the following non-residents: whooping cough, 1; tuberculosis, 2.

Hospital Bequests.—The will of J. S. Bailey, West Roxbury, provides that $1000 a year be paid to the Boston Nursery for Blind Babies, and after the death of the last beneficiary named in the trust, $25,000 is to be paid to this institution. Other bequests included gifts to the Children's Hospital on Longwood Avenue, Roxbury, the Home for Aged Couples, Home for Aged Men, and Home for Aged Women.

The Metropolitan Water and Sewerage Board.—The seventeenth annual report of the Metropolitan Water and Sewerage Board presents a detailed statement of its activities for the year 1917. The construction and maintenance of the water and sewerage works is described. Because of the high price of labor and materials, a large portion of the construction work already authorized has been deferred with the hope of carrying out the projects under more favorable conditions. The water supply has been protected by filtration, constant inspection of watersheds, chemical, microscopic, and bacterial examinations. The quantity of water supplied to the Metropolitan Water District amounted to a daily average of 110,032,000 gallons. The extension of the Deer Island sewerage system has been completed. Detailed statistics relative to the water works, sewers, and pumping stations are included in the report.

Obituary.

SAMUEL JEAN POZZI, M.D.

Professor Pozzi, the distinguished French surgeon and gynaecologist, was fatally shot on June 13th in his consulting-room in Paris by a lunatic patient. The following are extracts from his obituary in the *Lancet*:

"Samuel Jean Pozzi was born at Bergerac (Drodogne) in 1846. He was educated at the lycées of Pau and Bordeaux, becoming a student of medicine in Paris in 1869, where he was an apt pupil of Paul Broca. His early academic successes obtained him the title of agrégé in 1877, and six years later he was appointed surgeon to the Hôpital de Lourcine which, after Broca's death, became known by his name. At this time he devoted himself mainly to gynaecology, and in 1901 was elected to the chair in this subject founded by the city of Paris. Being charged by the French Government at different times with scientific missions to Germany, England, Italy, Austria, and the United States, he soon acquired a world-wide reputation. From 1885 to 1894 he acted as secretary-general of the French Congress of Surgery, and in 1895 was elected to the Academy of Medicine. In 1898 he became a senator, and added to his reputation that of an able man of affairs. He became President of the Surgical Society of Paris, of the Cong-

ress of Gynaecology which met at Marseilles in 1898, and he was one of the vice-presidents at the Paris International Congress of Gynaecology in 1900. He was an honorary Fellow of the Legion of Honor.

Professor Pozzi had a well-deserved reputation as a teacher. He held for many years the leading place among French gynaecologists, and did much for that branch of medicine both from its medical and surgical aspects."

Professor Pozzi was a prolific writer.

"After his M.D. thesis on pelvic fistulae, his first published work was on the subject with which his name is still chiefly associated—viz, 'The Value of Hysterectomy in Fibrous Tumour of the Uterus' (Paris, 1875). Other early works dealt with amputation wounds, cerebral localization, and sclerosis of the convolutions in mental disease. His famous textbook on 'Clinical and Operative Gynaecology' first appeared in 1890, was translated by the New Sydenham Society (1892-93), appeared in American form edited by Brooks H. Wells (1892), in German edition with a preface by P. Müller and in Russian (1897) in association with Voff. He was founder and for many years director of the *Revue de Gynécologie et de Chirurgie Abdominale*. He was a keen student of the history of medicine, and to him we owe the reasoned conclusion that the last illness of Princess Henrietta, daughter of King Charles I of England, was due to a ruptured extra-uterine pregnancy in the first or second month.

Professor Pozzi was a great traveller on behalf of official gynaecology. He was present at the annual meeting of the British Medical Association at Sheffield in 1908, introducing there a discussion on uterine displacements. He remained highly receptive of new ideas from whatever quarter, and after a visit to New York in 1909, returned much impressed by the transplantation of organs and tissues accomplished by Dr. Carrel at the Rockefeller Institute. One of his most recent addresses dealt with the hospital of the future, in which he drew on the abundant material collected on his travels. He was firmly impressed with the value of simplicity and adaptability, and recommended the use and construction of buildings which could be demolished without hesitation to be replaced by others of more recent ideas."

Miscellany.

RÉSUMÉ OF COMMUNICABLE DISEASES IN MASSACHUSETTS FOR JULY, 1918.

General Prevalence. The reported cases of communicable diseases for the month of July shows a marked decrease over all previous months of the year, the total number for the month being 6,270, with a case rate per 100,000 of 159.9. The total number of cases reported for June was 9,044, making a decrease for July of 2,774 cases.

This decrease was evident in all forms of communicable diseases with the exception of typhoid fever, which increased from 64 cases in June to 112 in July. This increase is, of course, due to the seasonable agencies which make the infection more easily acquired and communicated. No outbreak of importance occurred during the month.

Diphtheria. The disease was reported in 463 cases, giving the lowest total for any month during the year. The incidence was mainly in the larger cities and towns, and this fact brings forth the query: "Why is diphtheria allowed to exist in such large proportions, with its relatively high mortality rate, when it is one of the few diseases that can be diagnosed early and correctly by the laboratory, and for which specific medication is available." It is hoped that early recognition of the disease, efficient isolation of the patient, and effective quarantine of contacts will bring a more marked decrease in the number of cases of diphtheria.

Measles. The greatest decrease in numbers of cases reported is in this condition. The total measles cases for July was 1,962, as compared with June's 3,664—a decrease of 1,702. It is noted that the spread of measles is now extending from urban to rural communities, conveyed by vacation travelers with unrecognized cases in their numbers, or by visitation between the inhabitants of these places.

Scarlet Fever. Scarlet fever was reported in 200 cases in July as compared with 289 cases in June, a decrease of 89 cases.

Whooping Cough. The prevalence of whooping cough continues to be high, and its incidence is widely scattered throughout the State. The prevention of infection with this condition becomes in a large measure a matter of educating those responsible for the well-being of their children. Authorities in preventive medicine are fully in accord with the United States Public Health Service's suggestion relative to the communicability of whooping cough, which is as follows: "Whooping cough is particularly communicable in the early catarrhal stages before the characteristic whoop makes the clinical diagnosis possible. Communicability probably persists not longer than two weeks after the characteristic whoop, or approximately four weeks after onset of catarrhal symptoms." If children are safeguarded from infection during this four-weeks' period, the morbidity rate for whooping cough can be reduced.

Typhoid Fever. Typhoid fever alone shows an increase for the month. There were 112 cases reported for July as compared with 64 for June. The appended study of all cases of typhoid fever reported from January 1st to August 1st, occurring in the age groups 1 to 11, was made to ascertain what percentage of typhoid was verified by a positive Widal examination. It will be noted that nearly 50 per cent. of these cases either had no blood examination or furnished no information regarding Widals upon the history sheet.

One cannot help but wonder why the laboratory is not used more freely when positive Widal reactions would facilitate the diagnosis of typhoid fever or aid in the differentiation of simulating conditions.

Tetanus. There were four cases reported during the month, none, however, attributable to the Fourth

of July celebration. One case occurred in an 11-day-old infant; two received puncture wounds; and one was not ascertained.

RARE DISEASES.

Anterior Poliomyelitis was reported from Beverley, 1; Boston, 1; Cambridge, 1, Easthampton, 1; Medford, 1; New Bedford, 3; Newton, 1; and Warren, 1; total, 10.

Anthrax was reported from Brockton, 1; Methuen, 1; and Woburn, 2; total, 4.

Dog Bite requiring anti-rabic treatment was reported from Clinton, 1.

Dysentery was reported from Adams, 1; Boston, 3; Cambridge, 1; Danvers, 1; Fall River, 1; Greenfield, 2; Melrose, 2; Middleboro, 2; New Bedford, 2; Shirley, 7; Somerville, 1; Sutton, 1; and Worcester, 6; total, 30.

Epidemic Cerebro-Spinal Meningitis was reported from Andover, 1; Belmont, 1; Boston, 5; Cambridge, 1; Camp Devens, 1; Chelsea, 2; Fall River, 1; Fitchburg, 1; Greenfield, 1; Haverhill, 1; Lawrence, 2; Milford, 1; Norwood, 1; Somerville, 2; Springfield, 2; Waltham, 1; and Winthrop, 1; total, 25.

Malaria was reported from Blackstone, 3; Boston, 4; Camp Devens, 3; Dedham, 3; Fall River, 2; and Lynn, 1; total, 16.

Pellagra was reported from Everett, 1.

Septic Sore Throat was reported from Beverly, 1; Hudson, 1; and Watertown, 1; total, 3.

Smallpox was reported from Boston, 1.

Tetanus was reported from Great Barrington, 1; Peabody, 1; and Worcester, 2; total, 4.

Trichinosis was reported from Lynn, 1.

Trachoma was reported from Boston, 6; Chelsea, 1; and Gloucester, 1; total, 8.

1918 TYPHOID FEVER (AGES 1 TO 10 YRS., INCL.)

WIDAL	Under 1 Yr.	1 Yr.	2 Yrs.	3 Yrs.	4 Yrs.	5 Yrs.	6 Yrs.	7 Yrs.	8 Yrs.	9 Yrs.	10 Yrs.	Total
Positive	..	2	4	2	4	5	4	5	7	9	6	48
Atypical	..	..	1	..	..	..	1	..	..	..	..	2
Negative	..	..	..	..	..	1	..	..	..	..	1	2
None taken ..	1	1	..	..	1	..	2	3	1	..	..	9
No information	..	..	1	..	3	2	4	4	7	3	3	27
Total	1	3	6	2	8	8	11	12	15	12	10	88

PROTECTION OF PROPERTY OF PHYSICIANS IN MILITARY AND NAVAL SERVICE.

In accordance with the request of the Middlesex South District Medical Society, a summary is printed herewith of the "Soldiers' and Sailors' Relief Act," which was passed by Congress and signed by the President, March 8, 1918, entitled "An Act to extend protection to the civil rights of members of the Military and Naval Establishments of the United States engaged in the present war."

The act applies generally to all members of the military or naval forces of the United States, including members of the Nurse Corps.

Before judgment is entered in any suit the court will appoint an attorney to represent the absent defendant.

If the defendant defaults an appearance in court, following a summons, the plaintiff must file an affidavit setting forth facts showing that the defendant is not in military service, and if an affidavit is not filed, no judgment shall be entered without first securing an order of the court directing such entry.

Judgments may be re-opened and actions stayed.

When rent does not exceed the amount of $50 a month, no eviction may be made except upon leave of court.

Instalment contracts are protected; for instance, the payment of interest on mortgages may be deferred in the discretion of the courts.

"Article III, Sec. 302 (3). No sale under a power of sale or under a judgment entered upon warrant of attorney to confess judgment contained in any such obligation shall be valid if made during the period of military service or within three months thereafter, unless upon an order of sale previously granted by the court and a return thereto made and approved by the court." The obligation referred to means an obligation originating prior to March 8, 1918, and secured by mortgage, trust deed, or other security in the nature of a mortgage upon real or personal property owned by a person in military service at the beginning of the period of military service and still so owned by him.

Protection is afforded against the lapse of life insurance and also against the selling of property for taxes.

Physicians about to enter the service of the Government are advised to procure a copy of the booklet published by the Boston Legal Aid Society entitled "Legal Suggestions for Soldiers and Sailors and Their Dependents." Copies may be obtained without charge by applying to the Boston Legal Aid Society, 39 Court Street, Boston, Mass.

The following table of contents shows the subjects covered by this booklet:

Chapter I. Allowances and allotments. (*a*) United States Provisions; (*b*) Massachusetts; (*c*) Red Cross Aid.
Chapter II. Compensation for Injuries. (*a*) United States Provisions; (*b*) Massachusetts Provisions.
Chapter III. Insurance. (*a*) United States Government Insurance; (*b*) Private Life Insurance.
Chapter IV. Rent; Debts; Mortgages; Suits in Court; Taxes.
Chapter V. Guardianship and Custody of Children.
Chapter VI. Wills.
Chapter VII. Soldiers' and Sailors' Wills.
Chapter VIII. Estates of Deceased Persons.
Chapter IX. Services by the Legal Aid Society.

WALTER L. BURRAGE, *Secretary.*

VOLUNTEER MEDICAL SERVICE CORPS.

STATEMENT BY DR. FRANKLIN MARTIN, MEMBER OF ADVISORY COMMISSION AND CHAIRMAN OF GENERAL MEDICAL BOARD, COUNCIL OF NATIONAL DEFENSE.

FOREWORD.

THE Volunteer Medical Service Corps was authorized by the Council of National Defense on January 31, 1918. Under this authorization the membership of the Corps consisted of all physicians who, because of over-age, physical disability, dependents and essential home needs, were not eligible for service in the Medical Reserve Corps of the Army or Navy.

Enlarged Scope of the Organization. On August 5 the Council of National Defense authorized a change in the scope of the organization and an increase and amplification of its Central Governing Board. Membership in the Corps as now authorized, makes eligible to the Corps every legally qualified physician, including women physicians, holding the degree of Doctor of Medicine from a legally chartered medical school, without reference to age or physical disability, provided he or she is not al-

ready commissioned in the Government Service. This organization has now the approval of the President, as indicated in the following letter:

(Copy.)

THE WHITE HOUSE, WASHINGTON.

My dear Dr. Martin: 12 August, 1918.

I have received your letter of August 5, laying before me the matured plan for the reorganized Volunteer Medical Service Corps, of which you ask my approval. This work was undertaken by you under the authority of the Council of National Defense; it has had great success in enrolling members of the medical profession throughout the country into a volunteer corps available to supply the needs of the Army, Navy and Public Health Service. In coöperation with the General Medical Board of the Council of National Defense, the strong governing board of the reorganized corps will be able to be of increasing service, and through it the finely trained medical profession of the United States is not only made ready for service in connection with the activities already mentioned, but the important work of the Provost Marshal-General's Office and the Red Cross will be aided and the problems of the health of the civilian communities of the United States assured consideration. I am very happy to give my approval to the plans which you have submitted, both because of the usefulness of the Volunteer Medical Service Corps and also because it gives me an opportunity to express to you, and through you to the medical profession, my deep appreciation of the splendid service which the whole profession has rendered to the Nation with great enthusiasm from the beginning of the present emergency. The health of the Army and the Navy, the health of the country at large, is due to the coöperation which the public authorities have had from the medical profession; the spirit of sacrifice and service has been everywhere present, and the record of the mobilization of the many forces of this great Republic will contain no case of readier response or better service than that which the physicians have rendered.

Cordially and faithfully yours,

(Signed) WOODROW WILSON.

Dr. Franklin Martin,
The Advisory Commission,
Council of National Defense.

EXHIBIT "C".

At a meeting of the Central Governing Board, held on Friday, August 2, it was moved by Dr. Sawyer, seconded by Dr. Martin, that the Central Governing Board shall consist of the present Central Governing Board (excepting Sherk, Bradford, and Brophy) and others as follows:

Surgeon-General William C. Gorgas, U.S.A.
Surgeon-General William C. Braisted, U.S.N.
Surgeon-General Rupert Blue, U.S.P.H.S.
Provost-Marshal General E. H. Crowder.
Dr. Franklin Martin, Chairman of Committee on Medicine and Sanitation, Council of National Defense.
Dr. Edward P. Davis, President Volunteer Medical Service Corps.
Dr. John D. McLean, Vice-President.
Dr. Charles E. Sawyer, Secretary.
Admiral Cary T. Grayson, U.S.N.
Dr. F. F. Simpson.
Dr. Frank Billings.
Dr. H. D. Arnold.
Mr. W. Frank Persons—Red Cross.
Dr. William H. Welch.
Dr. Victor C. Vaughan.
Dr. Robert L. Dickinson, Chief of Staff's Office.
Colonel R. B. Miller, U.S.A., Chief of Personnel Division.
Surgeon R. C. Ramsdell, U.S.N., Chief of Personnel Division.
Colonel James S. Easby-Smith, Executive Officer.
Dr. Joseph Schereschewsky, Assistant Surgeon-General (Personnel).
Dr. C. H. Mayo or W. J. Mayo.
Dr. William Duffield Robinson.
Dr. George David Stewart.
Dr. Duncan Eve, Sr.
Dr. Emma Wheat Gillmore.

GENERAL PLAN.

The Volunteer Medical Service Corps is exactly what its name indicates. It is a gentleman's agreement on the part of the civilian doctors in the United States who have not yet been honored by commissions in the Army and Navy, and a representative board of governors consisting of officials of the Government associated with lay members of the profession, in which the civilian physician agrees to offer his services to the Government if required and asked to do so by the Governing Board.

It is a method of recording all physicians who are not yet in service and classifying them so that their services when required will be utilized in a manner to inflict as little hardship on the individual as possible. It is a method by which every physician not in uniform will be entitled to wear an insignia which will indicate his willingness to serve his Government.

As more than sixty per cent. of the physicians of the country will be utilized in caring for the industries at home and the health of the home people, this large percentage of necessity will be expected to maintain their home status and continue their ordinary professional work.

A. Object of Corps.

1. Placing on record all medical men in the United States.
2. Aiding Army, Navy, and Public Health Service in supplying war needs.
3. Providing the best civilian service possible.
4. Giving recognition to all who record themselves either in Army, Navy, Public Health Activities or civilian service.

B. This Organization Provides.

1. Means for obtaining quickly men and women for any services required.
2. Furnishes recommendations and necessary credentials to assure the best of service, both military and civil.
3. Determines beyond question the subject's attitude toward the war.

NOTE.—Through this organization plan, many men will be registered for Army, Navy and Public Health Service who can be called when needed without delay, thereby a Medical Reserve of thousands of men will be created at once which will be immediately accessible for Army, Navy, Public Health and civilian service, no matter how urgent the needs.

Up to the present there have been so many to be called that no great difficulty has been experienced.

From now on quick needs will be more difficult to fill, except as they have been anticipated by having a direct line on all those who are willing to serve. This necessity the Volunteer Medical Service Corps fulfills, not alone as relates to war needs, but also to the increasing civilian needs.

C. Civilian Service.

One great need of definite organization is in relation to civilian service. Unless some fixed plan is adopted home people may suffer and medicine itself may be discredited.

This plan registers all medical men and women for all kinds of service and places them within reach of those who know the needs and will arrange for their supply.

D. Recognition.

In the Volunteer Medical Service Corps everyone will have definite recognition of his standing as related to the war and will receive proper credit for service rendered, whether in Army, Navy, Public Health or civilian service.

E. Conservation of the Profession.

If all medical services are conserved, we should not suffer. Indiscriminate placement and inconsiderate acceptance of men for war service may bring suffering, while specific organized handling of all medical forces will afford ample medical attention for all.

Such is the purpose of the Volunteer Medical Service Corps.

Tentative Classification Plan.

1. Fit-to-fight men under 40.
2. Reserves under 55.
3. Home forces over 55.
4. Ineligibles.

Reserves will consist of those who may be called upon for Army, Navy, Public Health and civilian service when necessity requires.

The Home Forces are those who are able to do civilian service only.

Definite Classification.

1. Medical Reserve Corps.
2. Volunteer Medical Service Corps.
3. Ineligible.

NOTE.—1. Such as are needed in the present or near future Army or Navy service.

2. Such as may be called for special Army or Navy and Public Health Service and for all civilian service.

3. Such as have been charged with unprofessional conduct, moral unfitness, or professional inaptitude.

RULES OF ORGANIZATION.

I. *Name.* The name of the organization shall be the Volunteer Medical Service Corps of the United States.

II. *Object.* 1. The object of the Corps shall be to mobilize the medical profession in the present emergency in order to provide for the health needs of the military forces and civil population of the country.

2. Services of members will be called for and rendered in response to requests to the Central Governing Board from the Surgeon-General of the Army, the Surgeon-General of the Navy, the Surgeon-General of the Public Health Service, or the General Medical Board of the Council of National Defense.

III. *The Corps.* The Corps shall consist of all members of the organization. The management of the Corps shall be vested in a Central Governing Board.

IV. *Central Governing Board.* The Central Governing Board shall be appointed by the Council of National Defense and approved by the President of the United States.

V. *Officers.* The Central Governing Board shall direct the activities of the Corps and shall select from among its own members a President, a Vice-President, and a Secretary.

VI. *State Governing Boards.* 1. The State Governing Boards shall consist of the members of the State Committees, Medical Section, Council of National Defense. The State Committees shall select, subject to the approval of the Central Governing Board, from five to ten of their members who are eligible for election in this Corps to act as the Executive Committees of the Volunteer Medical Service Corps in the respective States.

2. The duties of the Executive Committee of the State Governing Board shall be to consider applications for membership in the Corps from the respective States and to submit recommendations regarding these applications to the Central Governing Board.

3. The State Governing Board shall aid in the work of the Executive Committee of the State and perform such other duties as may hereafter be deemed essential by the Central Governing Board to accomplish the purpose for which the Corps was created.

VII. *Membership.* 1. Every legally qualified physician holding the degree of Doctor of Medicine from a legally chartered medical school, without reference to age or physical disability, may apply for membership in the Volunteer Medical Service Corps, provided he is not already commissioned in the Government service.

2. Women physicians are eligible.

3. Application for membership in the Volunteer Medical Service Corps shall be made upon blanks furnished for that purpose by the Central Governing Board for proper classification according to training and special fitness.

4. Any member of the Volunteer Medical Service Corps who wishes to change his classification may appeal to the Central Governing Board.

5. The Central Governing Board shall be empowered to elect from time to time to the Volunteer Medical Service Corps members of sanitary engineering and hygienic professions.

VIII. *Method of Election.* 1. The members of the Corps shall be graduates in medicine who are licensed to practise medicine in their respective States, who have made application for membership, who meet the qualification requirements that are now or shall from time to time be established by the Central Governing Board, who are eligible as under Article VII above, and who shall be elected to membership in the Corps by the Central Governing Board.

2. Each person elected to membership in the Corps shall be designated as a member of the Volunteer Medical Service Corps.

3. It shall be the duty of each member of the Volunteer Medical Service Corps to notify the Central Governing Board when he accepts a Government commission.

IX. *Insignia.* 1. Members of the Corps shall be authorized and required to wear the insignia of the Corps.

2. The insignia and certificate shall be secured by members of the Corps under such regulations as may be determined upon by the Central Governing Board.

3. The insignia shall not be loaned to any person not a member of the Corps, nor shall it be worn after notification that eligibility to the Volunteer Medical Service Corps has ceased to exist; and it shall be returned on demand of the Central Governing Board.

X. Any member of the Corps may be expelled for conduct which, in the opinion of the Central Governing Board, is derogatory to the dignity of the Corps or inconsistent with its purposes.

XI. The Central Governing Board shall be authorized to provide such regulations as shall from time to time become necessary.

XII. *Authorization.* The organization, the insignia, and the certificate have been authorized by the Council of National Defense.

RECENT DEATH.

FRANK ALBERT CROSSMAN, M.D. died at his home in Dorchester, Aug. 5, 1918, aged 59 years. Born in Lewiston, Me., he attended Bates College and received his degree from the Medical School of the University of the City of New York in 1882, and began practice in Fairfield, Me. In 1891 he came to Boston. He is survived by a son and a daughter. Dr. Crossman was a member of the Massachusetts Medical Society.